BRITISH MEDICAL JOURNAL

LONDON SATURDAY SEPTEMBER 28 1946

SOME VULGAR ERRORS IN REGARD TO GOITRE

BY

J. W. LINNELL, M.D., F.R.C.P. GEOFFREY KEYNES, M.D., F.R.C.S.

AND

J. E. PIERCY, F.R.C.S.Ed.*

During the past generation the importance of goitre as a fount of many unsuspected ills has become more and more recognized. It is but natural that new advances in any field of medicine should only gradually become known to the profession at large, and goitre is no exception to the rule. It is with the object of discussing some of the commoner fallacies concerning its dangers, diagnosis, and treatment that we who have had the opportunity of studying the condition over a long period of years venture to write this article. We would say it was the intention of the late Cecil Joll, who worked at our clinic throughout the war, to collaborate with us in its production, and that, though death prevented his doing so, he had already expressed his complete approval of the plan and the opinions embodied in it.

I. That, though goitres which are patently toxic need treatment, the great majority of the rest are harmless or practically harmless, will probably remain so, and may safely be left untreated

By a curious coincidence an article in the *Journal of the American Medical Association,* entitled "Potential Dangers of Nontoxic Goiter," by Cole, Slaughter, and Rossiter (1945), was published almost simultaneously with one written by Linnell (1945) in the *Practitioner,* entitled "The 'Harmless' Goitre," which ran on much the same lines. Both drew attention to the danger of such complications as (1) the development of thyrotoxicosis with its many and multifarious complications, (2) carcinomatous changes, and (3) pressure through increasing size. These complications are discussed in greater detail below. In the discussion which followed the reading of the American paper one speaker stressed the risk of sudden pressure by haemorrhage into the substance of the gland—a somewhat rare complication—though this point had not gone unnoticed by us.

1. *Thyrotoxicosis.*—The common belief that comparatively few goitres become toxic has no foundation in fact. The American workers we have mentioned believe that no less than 50% of all non-toxic goitres become toxic if left untreated, and add that, in view of the narrowness of gradation between non-toxic and toxic nodular goitres, this figure may well be too low. We, for our part, believe with Hertzler (1936), and many other workers in different parts of the world, that by the time early middle life is reached goitres without some evidence of associated toxicity are rare. It would seem that most medical practitioners recognize only the gross and more easily discernible symptoms and signs of thyrotoxicosis; those of less degree go unrecognized or are disregarded as being of little importance. These symptoms, it may be said, often can only be detected by careful observation, for they may amount to no more than some of the following: lassitude, minor or occasional palpitations, slight irritability or emotional instability, loss of weight, irregular sweatings or feelings of heat, a small rise of the resting or, better, sleeping pulse rate, a fine digital tremor, the suspicion of a stare due to retraction of the upper lids, and an almost imperceptible difference in the size of the palpebral fissures. The fact that there may be phases of exacerbation and intermission of the symptoms does not make their discovery easier. As to their being of little consequence, it cannot be too strongly emphasized that they are of the greatest importance. Unfortunately, it is not yet generally appreciated that next to acute rheumatism toxic goitre is the most fruitful cause of auricular fibrillation, and goitres of apparently such mild toxicity as we have described are, without any doubt whatever, often responsible for it. In this connexion it may be well to add that occasionally auricular fibrillation has been, in our experience, *apparently* the very first sign of toxic change. Other signs were no doubt there, but were so slight as to escape observation. Toxic goitre, whatever the degree of toxicity, can also cause auricular flutter, both paroxysmal and established, and auricular paroxysmal tachycardia; but these are relatively rare complications.

To exemplify the frequency of auricular fibrillation as a complication of toxic goitre Papp (1945) says that 20% of all patients with toxic goitre develop this symptom, and that, though it is exceptional under the age of 30 and uncommon between 30 and 40, it becomes increasingly frequent thereafter, so that 80% of all cases of thyrotoxicosis fibrillate after the age of 60. These figures are sufficiently arresting, and our only comment is that, as the significance of the milder degrees of thyrotoxicosis is more widely recognized, it will almost certainly be found that the total percentage of patients who develop fibrillation is considerably higher. Generally the fibrillation is at first paroxysmal and only later established—a matter, as we shall see, of considerable importance; and the fact that established auricular fibrillation is a forerunner of congestive failure must never be forgotten.

2. *Carcinomatous Change.*—American workers are evidently very much more concerned about this danger than we on this side of the Atlantic. In the article already referred to it is stated that no less than 7.2% of 523 non-toxic goitres of all kinds operated on were found to be carcinomatous, and that among single non-toxic nodules as many as 24% were so affected. Lahey, the chief of the famous clinic of that name, in the discussion which followed the reading of the article, insisted that neither the size of the goitre nor the age of the patient mattered; that he had known a boy of 9 die of carcinoma of the thyroid, and that he had had several patients with the same condition at 12, 13, and 14 years of age. This would fit in with the belief held by many that most carcinomas of the thyroid derive from foetal adenomas: a belief, however, that is incapable of proof, as by the time mid-life is reached the tumour has, as a rule, suffered so much change through growth and haemorrhages into its substance that it is impossible to be sure as to its original structure.

We must confess that we have so far seen no carcinomas in children, though several have occurred in quite young people. The majority have been in patients of middle life or later. Still, there are a disconcerting number of patients in this country whose goitres are allowed to become patently carcinomatous before they are deemed to be proper subjects for surgery; and we would insist that by the time the

* Members of the L.C.C. Thyroid Clinic.

textbook picture of carcinoma of the thyroid is present the growth has penetrated the capsule and invaded the surrounding tissues, so that as a rule the hope of a surgical cure is past, even if by surgery and deep *x*-ray therapy life can often be prolonged for many years. It is lamentable to see, as we have seen, patients with widespread secondaries who have, over a long period of years, been urged not to worry about their goitres, and have continued to receive this advice even though they were steadily increasing in size and fixity and sometimes causing a sense of pressure or even pain. We would stress that tenderness on pressure is often an early sign of malignant change, and several of our cases have been diagnosed correctly on the basis of this observation. Unfortunately the innocent goitre, though usually painless, is occasionally painful; a haemorrhage, for instance, can very closely simulate malignancy; and as a rule it is only in the laboratory, after operation, that early malignant change can be definitely diagnosed.

3. *Pressure.*—Displacement, distortion, and narrowing of the trachea are some of the commonest findings in the examination of patients with large goitres, particularly of the nodular type, and more especially if there be retrosternal prolongations. Sometimes no symptoms result; in some patients, however, the goitre causes definite stridor and distress—possibly only on effort—or a mild dysphagia. A persistent irritating cough, again, may occasionally be the presenting symptom, while one of the earliest symptoms of all can be a choking sensation which awakes the patient. These symptoms are all due to chronic pressure, but a nodular goitre—even a foetal adenoma in a young subject—may occasionally be the seat of a sudden haemorrhage causing pain, swelling, and frightening sensations of suffocation. Death seldom follows, though this has happened once in our clinic.

II. That to diagnose toxic goitre it is necessary to find tachycardia

There is little doubt that the cardiovascular, nervous, and metabolic systems are all affected to some degree by toxic goitre, but sometimes, for an unknown reason, only one, or it may be two, of these systems are affected to any marked degree. Thus we have seen a number of patients with many of the classic symptoms of toxic goitre in whom the heart rate is little, if at all, increased over the period of observation. In this connexion it may be worth while to add that during the intervals between attacks of paroxysmal auricular fibrillation due to toxic goitre the heart rate may be normal or rarely slower than normal.

III. That loss of weight is a constant feature of toxic goitre

This again is not true. Maintenance, or even an increase, of weight is not very uncommon even in patients with primary toxic goitre, where loss of weight is a recognized cardinal symptom. As was pointed out in the previous section, the toxic process may miss, or almost miss, the metabolic system, and this may be the cause of the phenomenon. Sometimes a ravenous appetite, combined with a good digestion and efficient absorption, may in its effects counterbalance or even exceed—for a time at any rate—those produced by an increased metabolism. But doubtless there are other reasons, at present unknown to us. It has, by the way, been urged by Trotter and Eden (1941) that surgical treatment in plump patients with Graves's disease is attended with a greater risk to life and is less satisfactory than in the ordinary type of patient. This is not confirmed by our experience.

IV. That no goitre should be considered toxic unless the basal metabolic rate is found to be above normal

This would seem to be almost an article of faith among the profession as a whole, and perusal of the recent spate of papers on thiouracil has done nothing to weaken our impression.

Regarding the test, the late Cecil Joll was wont to say in his later years that, though it was the best laboratory test we had, it was "a poor best"; and with this opinion we fully agree. A test which accounts readings of 15 points above and below normal as "within normal limits" can hardly be regarded as satisfactory, and the fact that the same patient under apparently identical conditions can give very different readings on two successive days shows how misleading single estimations may prove. We fully appreciate the far greater value of a "level" based on a large number of estimations made at short intervals; but, unfortunately, in this country the necessary finances and facilities are generally lacking. Again, even in definite thyrotoxicosis, exacerbations and remissions are, as we have already said, comparatively common, and during a period of remission—which may be long—the basal metabolic rate may be within normal limits. The point, however, which we especially wish to make is that in the very large and important group of goitres to which we have drawn attention, where the toxicosis is minimal and yet the danger of eventual auricular fibrillation is real, so little is the general metabolism affected as a rule that it is rare to find the basal metabolic rate significantly raised.

We have no desire to decry the occasional value of the test, but the longer our experience has become the greater emphasis we have tended to put on an appraisement based on a careful clinical examination. That a course of thiouracil in doubtful cases might provide valuable evidence for or against the presence of thyrotoxicosis occurred to us, as to others, soon after its introduction, and we have often used it for this purpose. It is as yet too early to speak definitely, but such a therapeutic test may possibly prove an adequate substitute for an estimation of the basal metabolic rate.

V. That iodine cures

We rarely see a new patient with toxic goitre who has not been taking iodine for weeks, months, or even years. There is no evidence whatever for the belief that this drug cures. Waller (1914), in the original paper on its use in Graves's disease published in the *Prescriber*, did not make this claim; nor has any authority done so since. Its beneficial results are, unfortunately, only temporary, and its use ought, in our opinion, to be restricted to the period immediately preceding, and possibly that immediately following, operation. It is doubtful indeed if, owing to its misuse, it has not been more of a curse than a blessing in the treatment of thyrotoxicosis. Through the widespread belief in its curative power operation has often been unduly delayed until heart complications, extreme emaciation, or even a psychosis have supervened.

VI. That treatment by deep x rays is a satisfactory alternative to surgery in toxic goitre

This belief is probably not so widespread as it once was, but it still persists. This little we would say on the subject: *x*-ray therapy is generally conceded to be of no value in nodular toxic goitre—and in this connexion it is well to realize that many goitres, which clinically do not appear to be nodular, are found at operation to be of this type. Furthermore, as regards primary toxic goitre, Joll, who was extremely doubtful of the value of *x*-ray therapy, used to say that the radiologists who wrote so strongly in its favour seemed to forget that a large part of the gland was situated behind the trachea, so that irradiation powerful enough to destroy gland tissue in such a situation would almost certainly cause serious damage to the tracheal mucous membrane. In any event the results have, in our own experience, for the most part proved very disappointing. One of the most devastating criticisms of this mode of therapy was made by Dunhill (1935), an erstwhile member of our unit, when he stated that of 140 adults so "cured" no fewer than 118 were found to have established auricular fibrillation at a later date. In face of such a statement it would seem unnecessary to pursue the argument further.

VII. That the advent of thiouracil has removed the need for operation save to relieve pressure symptoms or for cosmetic reasons

This doctrine is being widely preached at the present time, and enthusiastic reports of the virtues of the new drug follow one another in the journals with an almost monotonous regularity. Even the writer of a leading article in the *Lancet* of April 14, 1945, declared, with regard to the question whether thiouracil should replace thyroidectomy as the standard treatment of toxic goitre, that there were strong indications that it might do so. From the first, voices have been raised protesting that the claims made for it are excessive and that various

dangers attend its administration, but they have tended to be drowned in the chorus of approval. We soon felt it our duty to add our voices to those of the minority. To us it was deplorable that a drug, potent not only for good but also for evil, should be thrown on the market to be used indiscriminately and generally speaking without adequate supervision, until much more was known about the indications for its use, its limitations, and its dangers. That by preventing the final synthesis of thyroxine in the gland it can in most instances inhibit thyroid activity and so alleviate thyrotoxic symptoms, there is no doubt; that in patients in whom the toxicosis is temporary and self-limited it can maintain normal health till the attack is over appears likely; that already numbers of patients have been able to resume and maintain their normal activities as long as the treatment is continued, and that in a considerable proportion remissions can last for many months after a discontinuance of the treatment, is certain; but up to date there is no convincing evidence that it cures.

As matters stand it would seem that for its beneficial effects to be maintained it must usually be given for an indefinite period, since thyrotoxic manifestations almost always recur sooner or later after its discontinuance, and generally sooner. Furthermore, as Grainger, Gregson, and Pemberton (1945) point out, initial improvement is sometimes followed by relapse while the patient is still under treatment. Nor must it be forgotten that some patients prove recalcitrant, and that in 10 to 20% of those treated there are complications—some merely annoying, others frankly dangerous. This should soon damp the first enthusiasm, especially as the possible complications are many, and it would appear that their number grows with the growth of experience of the drug. Headache, nausea, and vomiting—usually transient, but occasionally so severe or prolonged as to cause discontinuance of the treatment—pyrexia, splenic enlargement, various rashes, adenitis, enlargement of the salivary glands, diarrhoea, jaundice, oedema, pains in the joints, leucopenia, thrombocytopenia, agranulocytosis, and myxoedema are some though not all of those which have been described. Of these a certain degree of leucopenia is usual, and in the large majority of patients has no serious import. Agranulocytosis is, however, in a different category, since it carries a high mortality. According to the latest American statistics it has occurred in over 2% of the patients treated whose records are available, and it is now known that it may develop with disconcerting suddenness, which is not necessarily dependent on the dosage and may not be presaged by a notable fall in white cells. As Cocâson (1945) has pointed out, a long period of perfect tolerance to the drug may end in this or some other toxic reaction. It is argued that comparatively few deaths due to thiouracil have been reported to date, but with its wide use among practitioners, many of whom are unlikely to be able to make the difficult diagnosis of agranulocytosis, the number of deaths from this cause alone is almost certainly greater than that recorded, and, furthermore, we would suggest that a drug proved capable of causing severe damage not only to the haemopoietic system but also to the liver in certain patients treated for a short time is not unlikely to cause harm to all patients treated for a long time; and the warning given by Broders and Parkhill (1944) that "the thiouracil goitre is more of a cellular hyperplasia with mitosis very much in evidence and so, therefore, more comparable to a carcinoma," only adds to our apprehension. As to the effects of thiouracil on the size of the goitre, although many examples of primary toxic goitre have been described in which after long treatment there has been a marked decrease in size, occasionally the tendency is to an increase which, in our experience, may be amazingly rapid. Little, if any, decrease can be expected, of course, in nodular toxic goitres.

All this, however, is not to say that there is no place for thiouracil in treatment. From the first we have held with Lahey (1945) that it has a very valuable use in preparation for safer operation, if not as a method of cure; and now the conclusions reached by the American Council of Pharmacy and Chemistry (1946), based, as they are, on a survey of no fewer than 5,745 patients treated with it for various periods, would appear to prove us right. They are that available evidence shows that thiouracil can be recommended only in pre-operative treatment and where operation is for any reason contraindicated. Before the publication of this report, however, we had formed the opinion that surgery in good hands is greatly superior to thiouracil as a mode of treatment. It offers a prospect not only of rapid removal once and for all of the tumour and the manifest dangers connected with its presence, such as pressure, haemorrhage into its substance, carcinomatous change, and the not unimportant anxiety the mere presence of a tumour occasions, but also of a rapid disappearance of thyrotoxic symptoms. The risk of development of auricular fibrillation is practically removed, and where it is present there is good hope of a quick return to normal rhythm. Convalescence too is relatively brief. In addition we believe that in the end the mortality rate will be found to be lower.

VIII. That patients with auricular fibrillation and gross signs of congestive failure are too ill for operation

This, we find, is a fairly common belief in the profession. Yet we have seen scores of such patients not only come safely through the operation (sometimes done in stages) but even take on a new lease of active life and enjoy reasonable health for years afterwards. Admittedly the operative risk is greatest among these patients, but several who were apparently moribund have been saved. If, and only if, a marked degree of thyrotoxicosis is present is thiouracil indicated in the preparation of this class of patient, so far as our experience goes. Then it may prove to be of the greatest value.

IX. That the results of subtotal thyroidectomy in toxic goitre are usually unsatisfactory

Had we not heard this opinion of the value of the operation expressed on several occasions by postgraduate students we should not have deemed it worthy of inclusion in our list. We can only think that these observers have been unfortunate. The operation is regarded by thyroid surgeons everywhere as one of the most satisfactory. Dunhill (1934), for instance, found that 84% of 428 patients were able to live "approximately normal lives" after operation; Joll (1932) that 90% were able to return to a "full and active life" within three months of operation; and Keynes (1935) that nearly all patients operated on were enabled to live an approximately normal, instead of a semi-invalid, life, and the majority to assume full activity both physical and mental.

Nursing is generally recognized as one of the most arduous professions, and yet of some 50 nurses operated on for toxic goitre at our clinic all have resumed full work. As regards cardiac complications, one can almost promise subjects of paroxysmal auricular fibrillation that they will lose their attacks altogether after operation, while the majority of those with established auricular fibrillation regain normal rhythm either spontaneously or with quinidine, and in those who fail to do so the ventricular rate can nearly always be adequately controlled by digitalis. At the same time it must be emphasized that in patients with long-continued auricular fibrillation, and especially in those in whom congestive failure has resulted, the heart is irretrievably harmed to a greater or less degree, and expectation of life is consequently shortened. Generally speaking, auricular fibrillation, even paroxysmal, is an indication that surgery should have been brought to bear at an earlier stage.

X. That subtotal thyroidectomy in goitre, and especially in toxic goitre, is such a dangerous operation that it should be advised only as a last resort

That it carried a very high mortality up to twenty-five years ago is true. That to-day in uninstructed and inexperienced hands the mortality rate is too high we agree. In the hands of the expert surgeon, and especially if he is a member of a trained team, it is a very different matter. In such circumstances the figures show a mortality rate for all goitres operated on of considerably less than 1%, and for toxic goitres of approximately 1%, whether they come from clinics in America, Australia, New Zealand, or this country. As this paper is written primarily for readers in this country it may interest them to know that our figures compare favourably with those of the best clinics abroad; for instance, one of us (G. K.) has operated on some 3,700 goitres—mostly toxic—with a mortality

rate of less than 1%, and another (J. E. P.) has had but one death in his last 360 cases. By the judicious use of thiouracil it is now possible, in patients with the most profound thyrotoxicosis, to achieve a degree of pre-operative improvement which was previously beyond the capacity of iodine treatment. Thus not only will stage operations, formerly sometimes necessary, usually be avoided, but the mortality rate will be almost certainly still further reduced, so that an operative death should be a very rare event. It is, however, to be remembered that the gland substance, after treatment with thiouracil, is intensely vascular and friable, with the result that operation becomes a most difficult and trying business. The vascularity can, however, be greatly reduced by discontinuing the thiouracil for two or three weeks before operation and substituting iodine—a procedure which we believe we owe to Bartels (1945) of the Lahey Clinic.

XI. That thyroid surgery requires no apprenticeship, and that the results of the occasional thyroid surgeon compare with those of the thyroid unit

Though few technical difficulties are likely to be encountered in many uncomplicated goitre operations, yet there is an important minority where such difficulties are very real, extending even the experienced thyroid surgeon to the utmost. Again, no two goitres are alike, and therefore, contrary to the usual belief, there can be no uniformity as regards the general surgical procedure. In addition the medical, in particular the cardiological, side is a matter of the greatest importance, and demands that the surgeon be associated with a physician with special qualifications. Also, in no other branch of surgery is there a greater need for an experienced anaesthetist, ether anaesthesia being, in our opinion, almost entirely contraindicated. Finally, the nursing staff not only should be experienced in dealing with the many difficulties and dangers that may arise before and after operation, but should be possessed of sympathy, consideration, and ability to inspire their charges with the greatest possible confidence. We realize that the ideal is often unattainable and that all goitres cannot be treated at goitre clinics; at the same time, it should be within the capacity of most surgeons interested in goitre surgery to organize teams on the lines we have indicated. We are convinced through our own experience that they will find it well worth their while.

Conclusion

There are, of course, many other fallacies we could discuss, but those we have dealt with are in our experience some of the most important.

In concluding we would ask a question, which is also being asked again and again by thyroid surgeons to-day in America. It is this: In face of the many dangers which beset it, ought not at any rate every nodular goitre to be removed surgically without undue delay? It was a favourite saying of Joll's that no doctor in his senses waits for a tumour of the breast to develop secondaries before he advises operation, and so why should one wait for auricular fibrillation, pressure symptoms, carcinomatous change, etc., to develop in a patient with a goitre before one advises operation?

REFERENCES

Bartels, E. C. (1945). *Ann. intern. Med.*, **22**, 365.
Broders, A. C., and Parkhill, E. M. (1944). *Surgery*, **16**, 633.
Cole, W. H., Slaughter, D. P., and Rossiter, L. J. (1945). *J. Amer. med. Ass.*, **127**, 883.
Cookson, H. (1945). *Lancet*, **2**, 485.
Council of Pharmacy and Chemistry (1946). *J. Amer. med. Ass.*, **130**, 343.
Dunhill, T. P. (1934). *Bristol med.-chir. J.*, **51**, 155.
—— (1935). *British Medical Journal*, **2**, 798.
Grainger, A., Gregson, D. A., and Pemberton, H. S. (1945). Ibid., **2**, 343.
Hertzler, A. E. (1936). *Surgical Pathology of the Thyroid Gland*, Lippincott, Philadelphia.
Joll, C. A. (1932). *Diseases of the Thyroid Gland*, p. 617, Heinemann, London.
Keynes, G. (1935). *Practitioner*, **135**, 743.
Lahey, F. H. (1945). *J. Amer. med. Ass.*, **127**, 887.
Linnell, J. W. (1945). *Practitioner*, **154**, 138.
Papp, C. (1945). *Post-grad. med. J.*, **21**, 45.
Trotter, W. R., and Eden, K. C. (1941). *Lancet*, **2**, 335.
Waller, H. E. (1914). *Prescriber*, **8**, 153.

Lady Florey, who has carried out much valuable research work at Central Middlesex County Hospital while holding an appointment with the Medical Research Council which is now due to terminate, has been appointed research consultant at the hospital, with an annual honorarium.

ASTHMA IN CHILDHOOD

BY

T. N. FISHER, M.B., M.R.C.P., D.P.H.

Assistant Physician, Royal Manchester Children's Hospital; Honorary Physician for Children, Manchester Northern Hospital; Consulting Physician for Children, Warrington Infirmary

The following remarks are based on the case-notes of children suffering from asthma who have attended my out-patient clinic at the Royal Manchester Children's Hospital during the last twelve years. The main object is to draw attention to an increasing lack of balance in the approach to the problem of asthma in childhood. Too much is expected from detailed investigation of the child in hospital or asthma clinic and from the use of specific and non-specific forms of protein therapy, and not enough attention is paid to the study of the child in his normal surroundings.

This paper is concerned with those general principles that have been found helpful in the long-term treatment and management of the child and his disability—principles that are mainly directed to ensuring that the child is placed under the best possible conditions, in his natural home surroundings, for combating the disease and evading the establishment of the asthma habit. It is this aspect of the disease that I have found to be most neglected, as a result either of failure to diagnose the allergic disease in its earliest stages, or of failure to recognize the leading role that the nervous system plays in the establishment and perpetuation of the disease.

Diagnosis

The importance of early correct diagnosis cannot be overemphasized. Of 200 children, 48% developed symptoms during infancy, either spontaneously or as a result of the mild physiological strain of teething. Here we have asthma in its purest form, uncomplicated by organic tissue change or mechanical chest deformity. Another 39% had their first attack between the ages of 2 and 6 years, often ushered in by some respiratory infection, with measles and whooping-cough well to the fore. A proportion of the children with this type of onset exhibit that inextricable blending of allergic and inflammatory disease known as the "lung-damage type" of asthma. In 87% of these children, therefore, asthma was manifest before the seventh year of life.

Chest symptoms of unexplained origin in early life should immediately arouse suspicion of allergic disease. Unfortunately diagnosis is further confounded by the ambiguous clinical picture that asthma presents at this age. Of the two closely associated allergic phenomena that are responsible for the asthma attack, turgid swelling of the mucous membrane of the smaller branches of the bronchial tree, with increased permeability and exudation of fluid, plays the dominant role in early childhood, gradually to be superseded by smooth-muscle spasm, with its characteristically more abrupt manifestation, as the child grows older. As a result of this, early allergic disease closely simulates inflammatory disease of the bronchi. Unless allergic disease is borne in mind, and the evidence for or against it carefully weighed in the light of the family history and of other symptoms presented by the child, a hasty and much too casual diagnosis of bronchitis is made, with its implication of inflammatory disease. This is a cardinal error, responsible for much subsequent confusion, anxiety, and misdirection of treatment. If muscle spasm plays an unusually predominant part the onset of the attack is more abrupt and the child is more acutely ill, with obvious respiratory distress which, in these thermolabile subjects, readily induces pyrexia. The clinical picture then bears a superficial resemblance to bronchopneumonia. To the discerning eye, however, the patient's distress is obviously due almost entirely to respiratory embarrassment; toxic symptoms are absent, recovery is rapid, often dramatically so (to the no small credit of whatever form of drug therapy has been employed), and the whole sequence of events is apt to recur, for no ascertainable reason, at intervals of a few months.

It may be that only at the age of 5 or 6 an acute spasmodic attack of the more adult type of asthma throws a sudden

revealing light on the true nature of hitherto obscure and puzzling recurrent attacks of chest trouble. By this time much harm has already been done. Inaccurately diagnosed as suffering from chronic bronchitis by medical opinion, possibly with dark hints of an underlying tuberculous disposition as a reason for the inexplicable recurrence of the attacks, accepted, pampered, and fussed over as the gifted but weak-chested member of the family circle, his first scholastic steps gravely compromised if not already abandoned in despair, the child is well on the way to chronic invalidism if drastic steps are not taken to alter the family pattern of behaviour.

Treatment

The child victim of allergic disease has inherited an ill-balanced autonomic nervous system, which is usually part of a more general nervous irritability, and an abnormal sensitivity of certain local tissue cells. This hypersensitivity, which in asthma capriciously selects the cells of the respiratory system for its chief medium of expression, probably persists, in active or latent form, throughout life.

The object of treatment must be to pursue research into the nature of the baffling laws that govern this sensitivity and, until we know more about these laws and how to control or modify them, to bring such influences to bear on the child's developing nervous system as will ensure, so far as is possible, that his will dominates, and is not dominated by, the recalcitrant tissue cells. This aspect of the disease, with which I am mainly concerned in this paper, can most conveniently be considered under the three headings of nervous, alimentary, and respiratory.

Nervous

It is a matter of clinical observation that in the early years of life emotional excitement, especially if accompanied by some degree of physical exhaustion, is one of the two main exciting causes of the asthma attack. The other—climatic variation—is largely beyond our control. Underlying specific sensitivities may be present and we must ever be on the watch for them, but the excessive emotional reaction is the most commonly blamed detonator.

As the child grows, and his character and habits are formed, this emotional instability comes gradually more under the control of the will. The influences brought to bear on him during this formative period will help to determine whether the asthma attacks steadily decrease in number and severity, or whether this diffuse, amorphous emotional stimulus continues to elicit a response until the asthma habit is firmly established and has become crystallized round a series of conditioned reflexes, very often largely based on suggestion. The complex psychological situations that may become superimposed on this habituation have been elaborated by Gillespie (1936) and by Kerr Clarkson (1937).

The attitude of the parents is therefore all-important in these early years. Often inherently nervous and emotional themselves, and prone to worry excessively, it is of the greatest importance to explain to them the essentially nervous basis of the disease and to define in detail their correct attitude towards the child and his disability. Previous misconceptions, particularly the fear of tuberculosis which is often at the back of their minds, must be exorcised, and their confidence and co-operation in a radically new approach to the problem must be secured. They must be enjoined to cultivate and assume an air of quiet placid confidence that the chest trouble is a childhood complaint which is not going to persist. Any exhibition of their natural anxiety in the presence of an attack must be dissembled in front of the child. He must not be made to feel that his health is the subject of constant worry and solicitude. Such undisguised concern will reflect itself in the child in various ways according to his temperament. He may exhibit a corresponding state of chronic anxiety and apprehension, or a morbid and precocious interest in his own symptoms and importance, or a vigorous self-protective negativism—all states of mind that are highly conducive to perpetuation of the asthma attacks.

The beginning of school life is an important and potentially dangerous milestone in the life of the asthma child, and a searching test of the parental ability to appreciate and cope with the situation. The well-instructed parent will anticipate the attack, induced by the novelty and excitement, that almost inevitably follows the first adventure to school, discount it in advance with the aid of a little collaboration with the schoolteacher and possibly some suitable premedication, dismiss it as lightly as possible, and return the child to school even though he may be still wheezing slightly. The over-anxious parent, on the other hand, will greet the attack with consternation and confine the child to bed or indoors for a totally unnecessary period of two weeks or more. Then an apprehensive attempt is made to resume school, with the child worried, behind in his class work, and not yet accepted into the school community. There is a repetition of the attack, and all the conditions are to hand for the establishment of a vicious circle until the mere thought of school attendance may be enough to induce a recurrence.

The second duty of the parents and those in close attendance on the child must be to cultivate all the aptitudes of patient, untiring detectives, unobtrusively noting any circumstances that are observed to lead to an attack, with a view to avoiding, so far as is possible, a repetition of such circumstances in future. But all discussion of the suspected causes of the attacks must be forbidden in the presence of the child, and, in fact, the whole subject of asthma is better avoided as a topic of family conversation, except perhaps for occasional favourable comment when there is marked improvement in symptoms. At this suggestible age children can readily become persuaded that certain foods, circumstances, or environments are likely to bring on an attack. Unwise parental comment and undisguised apprehension will increase the probability of the attack occurring. In this way expectation, which Hurst (1929) regarded as the most common psychological factor, is established at a disastrously early age. By its aid the frequency and intensity of the asthma attacks may be powerfully influenced and reinforced by the attention of the conscious mind.

Apart from this all-important parental attitude, a more stable nervous system will be encouraged by a regular daily routine of life, free from over-exciting and physically exhausting experiences, but with any suggestion of valetudinarianism rigidly excluded. Adequate hours of rest and sleep must be insisted upon, and loss of sleep due to asthma attacks must receive full compensation during the day. The hard, dry, irritating, and exceedingly intractable cough of laryngeal allergy may be a still more serious cause of loss of sleep. There can be few more distressing sights than an asthma child exhausted by loss of sleep but kept awake by this racking cough. Sedatives in large doses, which must be determined for each child, are often the only means of overcoming the local irritation.

Alimentary

The protein skin tests are undoubtedly of great theoretical interest and present a vast field for scientific inquiry. They have, however, perhaps unduly focused attention on the search for specific allergens as exciting causes of the asthma attack. When they have been employed in these children the results cannot be said to have been very helpful, and careful observation by the parents I have found to be of much greater value. Any food clearly, and on more than one occasion, proved to be at fault must be modified in some way, as with milk, or eliminated. Care must be taken, however, to see that a too zealous parent does not carry out the process of elimination to excess. In practice, specific food sensitivities appear to be inconstant and variable at this early age, and it will be found that a previously suspected food may, after an interval of a few weeks, or in a different environment, be taken with impunity. Obstinate and most dramatic examples of sensitivity to specific foods do undoubtedly occur, but, though many foods came under suspicion, none was detected in these children as the sole cause of asthma. To what extent many of the reactions to ingested and inhaled substances in later childhood and adult life have been influenced by suggestion and incautious comment by the parents in early life must be a matter of individual speculation.

Subject to the considerations outlined above, excessive dietetic rules and restrictions are better avoided. A normal balanced diet and regular meal-times are of more importance for these often exuberantly over-active mercurial children.

Respiratory

The identification of specific air-borne allergens by means of the protein skin tests presents similar practical difficulties. Dust in any form, whether the result of high winds in dry weather, spring cleaning, or any domestic or industrial activity that results in a dust-laden atmosphere, is a frequent cause of asthma attacks, many of which can be prevented by a little forethought in the home. On the other hand, the child with the lung-damage type of asthma seems to be more sensitive to damp weather, and particularly to sudden changes in atmospheric conditions.

A healthy, unobstructed upper air passage and correct breathing habits are of primary importance. Without trespassing too deeply into the realm of the ear-nose-and-throat surgeon, one may venture to express the opinion that operation should seldom be undertaken except for the elimination of infection or the relief of obstruction secondary to chronic infection. A careful distinction has, of course, to be made between the latter and the intermittent obstruction due to oedema of the pallid mucous membranes of the nasopharynx and sinuses which is a feature of allergic disease.

It is certainly most unwise to make any optimistic promises of permanent relief from the asthma symptoms as a result of any operative procedure. Fifty-seven children under my care have had their tonsils and adenoids removed. The results, noted at least six months after operation, were: in 12 marked improvement was reported; in 36 no change in the incidence or severity of the attacks; in 6 the asthma was said to have been worse; and in 3 the operation was blamed for the onset of the disease.

Having ensured a free and unobstructed upper air passage, breathing exercises, based on the suggestions contained in the handbook published by the Asthma Research Council (1944), undoubtedly supply one of the most beneficial forms of therapy in this disease.

The child suffering from the lung-damage type of asthma presents a particularly difficult problem. Prevention, by treating those twin menaces to the organic structure of the lung, measles and whooping-cough, with even greater respect than usual in a potential asthma subject, and insisting upon protracted convalescence until the symptoms and physical signs of any respiratory infection in his early years have cleared completely, must be our first aim. When this type of asthma is already established it demands most careful investigation of the whole respiratory tract, with the co-operation of the bacteriologist, radiologist, and ear-nose-and-throat surgeon, in addition to the general measures of treatment.

Conclusion

A steady tendency to diminution in the severity of the attacks and cessation of symptoms for increasingly long periods as the child grows older was noted in the majority of these children. Those who develop symptoms in infancy and present the most uncomplicated form of the disease yield the most promising results, provided the diagnosis is prompt and the parents are intelligent and co-operative. Those suffering from the lung-damage type of the disease did not show the same promising progress. A follow-up has not been attempted. To be of any value a survey in ten or twenty years' time, noting the effects of adolescence and, in females, the events of the reproductive cycle, would be the only satisfactory way of pursuing the inquiry.

As has been emphasized, prognosis is vastly influenced by the character of the parents and the home circumstances. A temporary change of surroundings, various combinations of drugs, or specific or non-specific protein injection therapy may bring about an improvement of variable duration, often a most satisfactory and sustained remission. It may be added that the incidence of an acute illness, an operation, or indeed any abrupt change in the normal routine of life may bring about the same happy though often temporary alleviation. One or other of the former methods will often help to steer the child through a particularly severe phase of the disease, and a remission brought about by one of the latter events should be exploited to the full by insisting on prolonged convalescence. A subsequent relapse will, however, cause serious loss of confidence in both child and parent if the importance of taking the long-term view is not constantly inculcated into all concerned.

No rapid results, but a steady improvement in the later years of childhood, can be promised, and must be tacitly assumed by all as an integral part in the treatment and management of the disease.

REFERENCES

Asthma Research Council (1944). *Physical Exercises for Asthma*, London.
Clarkson, A. Kerr (1937). *British Medical Journal*, **2**, 845.
Gillespie, R. D. (1936). Ibid., **1**, 1285.
Hurst, A. F. (1929). *Practitioner*, **123**, 4.

PERFORATION OF THE ILEUM IN ENTERIC FEVER

NOTES ON 22 CONSECUTIVE CASES

BY

G. E. DUNKERLEY, M.B., B.S.

Few diagnostic problems are more urgent and yet more difficult to solve than those encountered in perforated typhoid ulcer. A recent analysis of the cases which have occurred during the last eleven years at the Kolar Gold Field Hospital, South India, has confirmed the belief, based on clinical experience, that the picture and subsequent course of perforated typhoid ulcer in this locality differ in certain respects from the accounts generally presented in textbooks. The information obtained from the records of 22 ileal perforations treated in this hospital between 1935 and 1945 is thought to be interesting enough to form the subject of a short paper.

Textbook Description

Perforation of the ileum occurs in a little under 5% of all cases and causes 30% of all deaths in enteric fever. It is said to be especially common in cases characterized by diarrhoea, meteorism, or haemorrhage from the bowel, and is most frequent towards the end of the third week, but may occur at any time after the second week. Diagnosis is difficult, for few of the classical signs and symptoms of perforation occur in the late stages of fever, when toxaemia is severe and the patient may be almost moribund. Authorities state that the first sign is often a rigor, sharp or sudden pain in the right iliac fossa or lower abdomen, with unusual tenderness and rigidity. One source of information suggests that collapse is unusual, but another gives sudden collapse as a common initial symptom. The temperature may fall temporarily or may be unaffected, while the pulse rises. After perforation a deceptive improvement may occur. The onset is so insidious in some cases that at necropsy unsuspected general peritonitis is found. If the affected loop lies in the pelvis, frequent and painful micturition or rectal tenesmus, and tenderness on digital examination, may be prominent symptoms. The pain in the abdomen is severe and persistent, increasing distension appears with early rigidity, and liver dullness may be obliterated. Opinions concur that an early polymorphonuclear leucocytosis generally accompanies the perforation but is an inconstant sign, while general leucocytosis does not appear early enough to be of value. The perforation generally lies within 12 in. (30 cm.) of the caecum, but may be elsewhere. Two or more perforations occur in 10% of cases. The mortality is admitted to vary from 75 to 95%, while perforation in ambulant cases is thought to be particularly high.

Incidence in Present Series

The series of cases to be described varies in some respects from the above clinical picture. During the eleven years 1935–45, 1,077 cases of enteric fever were treated in the Kolar Gold Field Hospital, and a total of 11 perforations occurred in patients under treatment—an incidence of 1%. Of these cases 10 were in hospital at the time of perforation and 1 was in bed at home. A further 11 perforations took place among patients with ambulant enteric fever, and these already had perforation with general peritonitis on admission. Twenty-two cases of perforated typhoid ulcer have thus been operated upon in this hospital in the period under review. Though the

incidence of perforation in ambulant cases cannot be estimated, the occurrence of the same number of perforations in ambulant as in non-ambulant cases is evidence of the prevalence of such mild enteric fever that the sufferers do not seek medical attention.

The hospital treats Indian mining employees (25,000), and Anglo-Indian and European employees and their families (3,000). The employees are almost all male, their ages varying from 15 to 65 years. All 22 cases were in males; the eldest was 50 and the youngest 6, the average age being 28, which is probably a little lower than the average age of employees. Seven were employed on surface work, and the remainder were underground workers. Two children aged 6 and 13 years are included. The younger was a schoolboy, a non-ambulant patient who spent eight days in bed at home before perforation; the elder was ambulant; both recovered.

Trauma.—One patient received a contusion of the abdominal wall while at work on the day of admission. It was conceded that the accident was a possible factor in causation of his perforation.

Preliminary Course

The length of history before perforation in non-ambulant cases, including illness before admission, was 9, 5, 8, 13, 11, 9, 12, 12, 8, and 18 days; average, 11 days. In two cases the length of history was not obtainable from the records. In ambulant cases symptoms of various kinds were experienced for 0, 3, 0, 15, 2, 3, 7 days before perforation. The average in these cases was 4 days, but in four cases no mention of this detail was recorded. Haemorrhage did not occur in any case prior to perforation. Diarrhoea was a preliminary feature in only one case of the series, and the occurrence of meteorism was not a prominent sign in any case before peritonitis.

Symptoms and Signs

Symptoms at Onset.—(*a*) Pain: In every case in which the symptoms at onset were recorded abdominal pain occurred. It was described as of sudden or shock-like onset in 4 cases, and in 6 it was severe when it began. In 4 the pain was chiefly in the lower abdomen; in the remainder it was general or referred to the vicinity of the umbilicus. (*b*) Irritation of Pelvic Viscera: Pain was the first symptom in all but one case, in which a desire to micturate preceded it. One other case had urinary symptoms or pain on micturition soon after the onset of abdominal pain. Two patients had symptoms of rectal irritation in the form of several loose motions after abdominal pain had started. In one of these a little blood was present in the faeces. (*c*) Vomiting: This was present at the onset in 5 cases, and had occurred a day or two before perforation in one other case (ambulant). Only two patients vomited more than once; one of whom vomited twice, another five times. (*d*) Rigor: Two patients had a rigor at or soon after perforation. (*e*) Temperature and Pulse: The average temperature and pulse rate on admission in ambulant cases were 100.2° F. (37.9° C.) and 110, with extremes of temperature of 97° and 102.6° F. (36.1° and 39.2° C.), and of pulse rate of 80 and 152. The patient whose temperature was 97° was the only one in the series who was afebrile on diagnosis. In the non-ambulant group the average temperature and pulse rate on diagnosis were 102° F. (38.9° C.) and 109, with extremes of 99.6° and 103.6° F. (37.55° and 39.8° C.) and of 88 and 130. (*f*) General Conditions: In 13 cases this was recorded or could be deduced from the records as follows:

General Condition	No. of Cases	Result	
		Recovered	Died
Good	1	1	0
Fair	7	3	4
Poor	4	0	4
Collapsed	1	1	0

Later Symptoms and Signs.—Careful notes of the degree of pain, tenderness, and rigidity at the time of examination were present in the records of 16 cases. (*a*) Pain: Severe in 8, and of moderate intensity in 8. It was general or around the umbilicus in all except one, in which it was worst in the iliac fossae. (*b*) Rigidity: This was severe in 4, moderate in 8, mild in 2, and absent in 2. It was greater in the lower abdomen in 3. (*c*) Tenderness: This symptom was severe in 5, moderate in 8, and mild in 3. It was greater in the right iliac fossa in 2, in the left iliac fossa in 1, in the lower abdomen in 2, and in the epigastrium in only 1 case. (*d*) Liver dullness was mentioned in only 5 case notes; it was present in 2, diminished in 2, and absent in 1. In 1 case shifting dullness was detected.

Blood Examination

Early total white blood cell counts were recorded in 5 cases, with a maximum of 12,000 leucocytes per c.mm., a minimum of 2,400, and an average of 7,500. The differential count was recorded in 4 cases as follows:

	Maximum %	Minimum %	Average %
Polymorphs	80	65	76
Lymphocytes	30	15	21
Mononuclears ..	5	2	3
Eosinophils	0	0	0

Blood was taken for a Widal test on the day of operation or within the next two or three days in 13 cases, and proved negative in 5. Haemagglutinins were employed, as the native community among which these cases occurred is not protected by T.A.B. inoculation. The results are:

Dilution:	1/50	1/100	1/125	1/150	1/250
No. of cases ..	2	1	2	1	2

Agglutination was highest against *B. typhosus* antigen in all but one case, in which *B. paratyphosus* A was agglutinated 1/50.

Surgical Procedure

In non-ambulant cases the time interval between perforation and operation averaged 11 hours, with extremes of 2 and 20 hours. In ambulant cases the exact period could be ascertained only in 4, with extremes of 7 and 26 hours, and an average of 13 hours. Among those with accurate records of time intervals, of 6 cases repaired within 12 hours 4 recovered; of 3 repaired from 12 to 24 hours after onset 2 recovered; and of 2 operated on from 24 to 36 hours after operation 1 recovered.

In all cases anaesthesia was induced either by nitrous oxide and oxygen or by chloroform–ether mixture 1 : 12, and was followed by open ether. A right paramedian incision was used in every case. When the correct diagnosis was established before operation a small low incision was made—low for convenience of access, and small to minimize the risks or extent of subsequent ventral hernia. The latter complication was a distinct hazard in cases of typhoid perforation, as many wounds in those who recovered became infected. The perforation was repaired with interrupted sutures through all coats transversely and buried by a continuous seromuscular stitch. Omentum was sewn over the repaired site. Later cases had 10 g. of sterile sulphanilamide powder intraperitoneally without any apparent influence on mortality. All were drained by separate suprapubic stab wound and rubber tube to the pelvis. The site of perforation was recorded in the notes of 13 cases. In 8 the following estimated distances from the ileo-caecal junction were observed: 12, 6, 9, 18, 3, 12, 15, 10 in. (30, 15, 22.5, 45, 7.5, 30, 37.5, 25 cm.). The average distance between a perforation and the ileo-caecal valve was thus 11 in. (27.5 cm.). In the 5 remaining cases the perforations were described as being in the lower ileum.

Post-operative Course and Mortality

Wound infection was a troublesome sequel in 8 cases, and was classified as severe in 5, moderate in 1, and mild in 3. One case had no wound infection, and most of the remainder died before definite evidence on this point was obtainable. Among those who died the period of survival after operation varied from 2 hours to 6 weeks; average, 7 days. Excluding the individual who survived 6 weeks the average period of survival was 4 days. Including those who died the average duration of fever after operation was 12 days; excluding deaths it was 18 days.

There were 5 deaths in the 11 ambulant cases, and 7 deaths in non-ambulant cases. The total mortality was therefore 55%; that in ambulant cases was 45%, and in non-ambulant cases 64%. The 7 deaths in non-ambulant cases represent the mortality from ileal perforation among the 84 deaths in 1,077 cases of enteric fever—i.e., 8% of all deaths. Mortality from all causes in enteric fever was 8%, and from perforation 0.7%.

Necropsy was not performed on patients dying from enteric fever. As it is possible that some died with unsuspected ileal perforation and general peritonitis the figure of 1% for the incidence of perforation in 1,077 cases may be somewhat low.

Table showing Mortality from Enteric Fever during the Period 1935–45

Year	All Cases Treated in Hospital			Cases with Perforation (Ambulant and Non-ambulant)	
	No.	Deaths	Mortality %	No.	Deaths
1935	21	2	10	1	—
1936	20	2	10	1	1
1937	59	5	8	2	1
1938	144	10	7	4	2
1939	48	9	19	1	—
1940	119	12	10	6	5
1941	122	6	5	1	—
1942	175	13	7	1	—
1943	148	10	7	—	—
1944	142	9	6	5	3
1945	79	6	8	—	—
Total ..	1,077	84	9	22	12

Discussion

Haemorrhage from the bowel did not occur in any case before perforation; persistent diarrhoea occurred only once, and meteorism severe enough to find special mention in the notes not at all. Rigor was an initial sign in only two cases. Four of the series conformed to the recognized description of irritation of the pelvic viscera by proximity of the perforated loop; dysuria and rectal tenesmus were present. Pain was the predominant initial symptom, and it was usually general or situated around the umbilicus. In only a small proportion was the first pain described as low, and it was never referred to the right iliac fossa.

When a clearer clinical picture had had time to develop, the symptoms and signs remained chiefly general, and reference to the iliac fossae was not the rule. Rigidity was greater in the lower abdomen in only 3 cases; and tenderness was greater in the right iliac fossa in 2, in the left iliac fossa in 1, in the lower abdomen in 2, and in the epigastrium in 1. It is clear that localization of symptoms and signs to the right iliac fossa in these cases was unusual. This is not unexpected. If the perforation occurred at the ileo-caecal junction pain in the right iliac fossa might logically be expected, but as the perforation was an average of 11 in. (27.5 cm.) from the junction—that is, about as far away as the average width of the abdomen—it is obvious that localized signs, if any, may appear anywhere in the abdomen. Some patients had no rigidity, slight pain, and mild tenderness—symptoms associated with some cases of enteric fever without perforation.

Fall of temperature to below normal was present in only one case—an ambulant one. A relative fall doubtless occurred in some cases, but was certainly not great, as the average temperature when diagnosis was made was 101° F. (38.3° C.). Increase in pulse rate takes place at the onset, and, as in other forms of peritonitis, the rate increases progressively unless a response is obtained by specific treatment. It seems that the general condition at the time of diagnosis is a useful prognostic sign.

The average time interval between perforation and operation was 11 hours. This long period is evidence that the onset was dissimilar to the catastrophic nature of perforation of a gastric or duodenal ulcer. In several cases the onset was particularly insidious; the patient was examined either as the result of some mild deterioration in condition noticed by the nurse, or during the routine daily round, and found to have signs of general peritonitis. Questioning did not reveal any outstanding symptoms indicating beyond doubt the actual time of perforation. Thus in four cases the interval between perforation and operation was doubtful.

The figures given of recovery rate in relation to time lapse do not illustrate the advantage of early operation, and are to be disregarded as not representative of the whole series. Blood counts were performed shortly after clinical examination had suggested the presence of peritonitis: although the total leucocyte count was within normal limits, the polymorphonuclear leucocytosis is considered to be of diagnostic value.

The early occurrence of perforation is noteworthy. Excluding ambulant cases (date of onset unknown), the average interval between commencement of illness and perforation was 11 days. This is widely at variance with the usual belief that the commonest time for perforation is the end of the third week. The fact that perforations do occur at this early period is substantiated by the average duration of fever after operation. Excluding deaths it was 18 days: even including deaths (average survival period 7 days) it was 12 days.

In the whole series of 1,077 cases of enteric fever 1% developed perforation of the ileum, in contrast with the usual expectation of 5%. This complication accounted for 8% of the total deaths, against the usual total of 30%. Perforation is five times less frequent than is mentioned in textbooks, and peritonitis as a cause of death four times less frequent; subject to the proviso that this conclusion has not been verified post mortem.

The mortality from perforation in this series is low when compared with the usual figures published, being 55% for the whole series and even lower in ambulant cases—namely, 45%. This is at variance with the impression that perforation of a typhoid ulcer in an ambulant patient is of particularly grave prognosis, and is no doubt associated with the absence of severe toxaemia preceding perforation in the local type of case.

To sum up, the most striking features emerging are:

1. Low mortality rate in a long series of cases of enteric fever.
2. Low incidence of perforation of the ileum.
3. Low mortality among those which did perforate.
4. The early period in the disease at which perforation took place.
5. Other variations from normal of subsidiary importance are the infrequency of diarrhoea, haemorrhage, or meteorism before perforation, and infrequency of rigors at onset.

The explanation of the first three factors must be either that enteric fever contracted in this part of Southern India is of a relatively benign variety, or that the type of treatment the patients received was attended with more success than usual. It is true that diarrhoea, haemorrhage, and meteorism—signs of a severe attack—were infrequent. Moreover, in my experience the recurrence rate is much less than the usually accepted 10%. On the other hand, it is to be expected that perforation would occur later in the course in milder cases, and an adequate explanation of its early appearance cannot be offered.

The treatment of enteric fever has been symptomatic, but a radical departure from common practice has been made in the abandonment of a liquid diet. Perforation of the intestine in enteric fever almost always takes place in the last 3 ft. (91.5 cm.) of the ileum, usually in the last foot (30.5 cm.), and ordinarily digestible food has been reduced to the physical characteristics of a liquid when it reaches this situation. It therefore appears to be not only unobjectionable but probably beneficial to permit patients with enteric fever to indulge their appetite for suitable solid food without restriction.

No attempt has been made to enforce any particular diet, but the usual dietary habits of the workmen have been followed according to their desires. In health the workman partakes of coffee, bread, or conjee (cereal boiled to a paste in water) in the early morning, and large meals of curry (highly flavoured and coloured spiced meat) and rice at midday and in the early evening. When sick the patient resorts to milk, conjee, coffee, and bread. On admission to hospital cases of enteric fever are at first given a diet of milk, coffee, conjee, and bread-and-butter. When appetite improves or the patient can comfortably take extras, eggs, milk puddings, soup, fruit, fish, and mince are added, and if the patient desires it he is given curry and rice once or twice a day according to his requirements. Patients

are always eager to take a full diet as soon as they are able, and this attitude is encouraged. Constipation is the rule, and diarrhoea is uncommon. Purgatives are never given; enemas only infrequently.

It may be that enteric fever in Kolar is comparatively mild, but it is thought that the dietary treatment has perhaps influenced prognosis for the better. At any rate, the patients have only enteric fever to contend with—the additional factor of semi-starvation has been eliminated. There is room for argument as to whether this form of diet has had a beneficial influence, but mortality statistics suggest that it has not had a deleterious effect.

Summary

A series of 22 consecutive cases of perforation of the ileum in enteric fever is described.

Perforation occurred unusually early—in the middle of the second week.

In 1,077 cases of enteric fever in hospital 11 perforations were detected. An equal number were met with in ambulant patients, indicating the existence of widespread ambulant enteric fever in this community.

The low mortality from enteric fever, the low incidence of perforation, and the comparatively low mortality from this complication are discussed with reference to the virulence of the infection met with and the possible effect of the treatment given.

I have much pleasure in expressing my thanks to Dr. W. B. Roantree, Chief Medical Officer, Kolar Gold Field, for his invaluable help in the preparation of this article, and I acknowledge my indebtedness to him and to Dr. J. M. Daly for allowing me to use the records of the cases which they treated.

AMOEBIASIS IN ITALY

BY

GRAHAM W. HAYWARD, M.D., F.R.C.P.

Assistant Physician, St. Bartholomew's Hospital; late Lieut.-Col., N.Z.M.C., Officer in Charge, Medical Division of a New Zealand General Hospital, C.M.F.

Recent accounts of amoebiasis occurring in India and Burma (Leishman and Kelsall, 1944; Payne, 1945) have described the difficulties of treatment and the high relapse rate, while treatment in the United Kingdom of men invalided from these theatres has again given poor results (Lamb and Royston, 1945; Bomford, 1944). The clinical picture of amoebiasis in Italy is different. Here the more obvious dysenteric symptoms are usually absent, and the chief difficulty is in the diagnosis of the chronic or the latent case. Once diagnosed the response to treatment is good and the relapse rate low. The present paper gives an account of the disease as it has been encountered in a New Zealand General Hospital, C.M.F., during the past year.

During the period July, 1944, to June, 1945, 4,601 patients were admitted to the Medical Division, and the relative frequency of "tropical" diseases is shown in Table I. It will be seen that amoebiasis accounts for over half the admissions in the diarrhoea–dysentery group and was 2½ times as common as malaria. This article is based on the 258 cases of amoebiasis seen during this period.

TABLE I.—*Total Admissions July, 1944, to June, 1945 (4,601)*

Infective hepatitis	2,016	Dysentery, bacillary	104
Amoebiasis, intestinal	252	Malaria	108
Amoebiasis, acute hepatic	6	Other diseases	2,006
Diarrhoea	109		

The duration of symptoms before admission varied from a few days to 18 months, with an average of 3–4 months. Of the 252 cases of intestinal amoebiasis, 82 were admitted primarily for other diseases, such as infective hepatitis, peptic ulcer, ascariasis, or anxiety neurosis, and the disease was in a latent or a chronic stage.

Symptoms

Diarrhoea.—A history of diarrhoea was given by 204 cases (81%). Of these, 70 were admitted with an acute attack, and 134 gave a history of mild recurrent attacks lasting 1 to 3 days and subsiding readily with R.A.P. (Regional Aid Post) treatment. True dysenteric symptoms of blood and mucus in the stools were seen in only 28 cases, and of these 16 had an associated bacillary infection. Forty-eight cases (19%) had had no attacks of diarrhoea since coming overseas.

Pain.—Complaints of abdominal pain were made by 106 (42%) patients. This was of three main types: (*a*) Recurrent attacks of aching, lower abdominal pain, particularly situated in the right iliac fossa and often associated with looseness of the bowels. (*b*) Epigastric pain or discomfort, related to food and resembling the pain of a peptic ulcer. Associated with this type of pain were often dyspeptic symptoms—anorexia, flatulence and nausea—and many patients were admitted with a tentative diagnosis of peptic ulcer or functional dyspepsia. Four cases had a radiologically proved duodenal ulcer in association with amoebiasis. (*c*) Aching pain in the right subcostal region, worse on lying on the right side, and often associated with a flatulent type of dyspepsia.

General Symptoms.—Vague general symptoms of lassitude, malaise, anorexia, and slight loss of weight were common, and in these cases a history of diarrhoea was usually obtained only by direct questioning. Weight loss was never severe, and no cases showed any marked evidence of toxaemia or debility.

Physical Examination

The most valuable physical sign in the diagnosis of intestinal amoebiasis is tenderness or thickening in the region of the caecum, and this was present in 63% of cases. There was often tenderness over both the ascending and the descending colon. Liver enlargement was found in 103 cases (41%), of which 37 had a coexisting infective hepatitis. This group will be discussed later. No help in the diagnosis of the uncomplicated case of amoebic dysentery was obtained from either the blood count or the sedimentation rate.

Sigmoidoscopy

This is a most valuable aid to diagnosis, and its routine use in all cases with a history of chronic diarrhoea or of vague dyspeptic symptoms occurring in a country where amoebiasis is prevalent would prevent many cases being missed. In the present series of 252 cases with positive stools, the majority of which were of the mild chronic type, 70% showed abnormal findings on sigmoidoscopy. This figure would have been higher had it been realized earlier that the type and extent of the ulceration seen in Syria and North Africa were uncommon in Italy and that the changes here were much less marked but none the less characteristic. The following changes have been observed:

(*a*) *Small superficial ulcers*, about 1–2 mm. in diameter, but seen on the valves and very easy to miss because of the frequent absence of a surrounding area of hyperaemia. In most cases, ulcers, if present, will be found on the lower four inches (10 cm.) of the bowel.

(*b*) *Pitting of the Mucosa.*—The treated case of amoebiasis may show pitting of the mucosa at the site of ulceration for several weeks afterwards. This appearance occurring in an untreated case, giving a history of intermittent diarrhoea (often admitted to hospital when the bowels have returned to normal), is highly suggestive of amoebiasis, and stool examination after purgation will show the *Entamoeba histolytica* in nearly all of these cases.

(*c*) *Granular proctitis* or patchy areas of granularity, often extending upwards into the colon, associated with excess of mucus on the bowel wall and often scattered submucosal haemorrhages. These changes are non-specific, but are often associated with an amoebic infection of the bowel. Amoebae may sometimes be found in mucosal scrapings from the ulcerated and pitted areas, but in the latent or chronic cases the percentage of positive findings obtained has not been high.

Stool Examination

The most certain method of diagnosing amoebiasis is the demonstration of the typical vegetative forms of *E. histolytica* in the stools. In the rare acute type of case passing blood and mucus in the stools, the finding of the entamoeba is a matter of no great difficulty if a fresh warm stool is examined. In the mild chronic type of case, which provided 72% of the total, considerable difficulty has been found in demonstrating amoebae, even when on clinical and sigmoidoscopic examination the diagnosis seemed certain. The usually advocated policy of examining six daily stools produced negative results in most

cases, and even the daily use of salts to provide a loose stool gave only a slightly higher proportion of positive findings. This difficulty has been overcome by producing frequent watery stools with the aid of calomel and magnesium sulphate, and sending up to the laboratory all stools passed on the day of the test. In this way a positive result can be obtained in one day in nearly all cases. Calomel, 5 gr. (0.32 g.), is given at night, and magnesium sulphate at 7 and 9 o'clock next morning. In the last 100 cases diagnosed in this way a positive result was obtained in the first stool in 24% of cases, the second stool in 15%, the third stool in 25%, and the fourth, fifth, and sixth stools in 8% each. Rarely, eight to ten stools would have to be examined before a positive result was obtained, but the average number was 3.5. The common sequence is for the first one or two stools to be negative; then, as they become watery and contain mucus, amoebae are found which at first may be atypical and only sluggishly motile. Subsequent stools in this case will almost invariably show actively motile amoebae containing red blood cells which are in every way typical of the *E. histolytica*. The exudate in the stool was occasionally "indefinite," but usually there was no exudate. An unusual finding in this series was the infrequency with which amoebic cysts were found in the stools—5% of the cases only. (Concentration methods were not used as a routine.)

The occurrence of amoebic ulceration of the colon with vegetative forms of *E. histolytica* in the stools in a patient entirely free from symptoms is not unknown. Several instances were encountered when undertaking a routine examination of stools from 23 cooks in a unit in which there was a continued mild incidence of amoebiasis. In six cases trophozoites of *E. histolytica* were found, and in one other cysts of *E. histolytica*. All seven men felt in good health and had not reported sick, although on close questioning three admitted to having had occasional mild attacks of diarrhoea during the previous three months. In four of the seven cases sigmoidoscopy revealed active amoebic ulceration.

X-ray Examination

The barium radiograph is in most cases of little value in diagnosing intestinal amoebiasis. In a few cases where the history has suggested a peptic ulcer, a barium follow-through has shown localized spasm of the caecum or colon, and subsequent stool examination has been positive for *E. histolytica*. The radiological changes in hepatic abscess and acute amoebic hepatitis are well known and need not be further discussed here. There is, however, a small group of cases which give a history of recurrent mild diarrhoea associated with malaise, lassitude, aching pain in the right subcostal region, and in which screening of the diaphragm shows a localized doming of the right half of the diaphragm in the postero-median aspect, with restricted movement. These cases have been afebrile, with normal blood counts, and stool examination has usually been negative for amoebae. The marked subjective improvement following emetine treatment, coinciding with a diminution in size of the liver bulge, makes the clinical diagnosis of chronic amoebic hepatitis probably a correct one. These cases have not been included in the present series as some doubt exists about the correctness of the diagnosis.

Treatment

The depressing results from standard courses of treatment reported from India and Burma have not been experienced in Italy, and it is obvious that there the disease runs a much milder course and responds more readily to treatment. During the early part of this year the standard M.E.F. (Middle East Forces) treatment was used (emetine, 1 gr. (65 mg.) daily, with quinoxyl 2½% enemata for 10 days, carbarsone 0.25 g. twice daily for 8 days, followed by emetine bismuth iodide, 3 gr. (0.2 g.) for 12 days), and latterly the C.M.F. (Central Mediterranean Force) course (emetine, 1 gr. daily for 3 days, emetine bismuth iodide 3 gr., concurrently with quinoxyl 2½% retention enemata for 10 to 12 days, followed by carbarsone, 0.25 g. twice daily for 8 days), strict attention being paid to the technique of giving the quinoxyl (Manson-Bahr, 1944). All cases with liver enlargement or in which there was any suspicion of amoebic hepatitis were given 10 gr. (0.65 g.) of emetine during their initial course of treatment and a further course of 6–10 gr. (0.4–0.65 g.) after three weeks at the convalescent depot. The immediate results have been good, and only two cases still had positive stools when examined three weeks after the conclusion of treatment. A complete follow-up of all cases has not been possible, but, as nearly all the cases occurred in New Zealand troops and all long-term cases or cases for evacuation from this theatre are transferred to this hospital, it is possible to give some idea of the relapse rate. To date 9 cases are known to have relapsed; 226 men have returned to full duties, 7 have been down-graded for base duties, and 19 have been graded unfit for further service overseas, chiefly because of persistent hepatomegaly or the presence of some associated condition such as coronary artery disease or duodenal ulcer.

Three of the relapsed cases with persistent diarrhoea, extensive ulceration of the colon, and trophozoites of *E. histolytica* in the stools have been treated with a 5-day course of sulphasuxidine (80 g.) and penicillin (1,200,000 units) before being given a second course of emetine bismuth iodide and quinoxyl (Hargreaves, 1945). The immediate results have been good, ulceration of the bowel healing and amoebae disappearing from the stools; but a further follow-up over a longer period will be necessary before they can be said to be cured.

Discussion

The difference between this series of cases and those reported from other theatres of war is obvious. In Italy the disease is for long periods mild or latent, and characterized either by recurrent attacks of diarrhoea or by persistent malaise with vague abdominal symptoms. Dysenteric symptoms are unusual (28 cases), and then often associated with a bacillary infection, while in 82 of the cases the primary admission to hospital was for some other disease. There is no definite evidence that an avirulent strain of *E. histolytica* exists, although it might be doubted if the amoeba was the cause of the vague general symptoms predominating in so many of these cases. The presence of ulceration as seen with the sigmoidoscope and the response to specific treatment, with subjective improvement much more pronounced than could be accounted for by a similar period of rest in bed and an adequate diet, leave little doubt that the amoebic infection is the cause of the symptoms and that the amoeba is not a harmless parasite in the bowel. Bearing in mind the possibility that some of these patients will, if untreated, develop signs of amoebic hepatitis or hepatic abscess after the war, the demonstration of *E. histolytica* in the stools should lead to the institution of a *full* course of anti-amoebic treatment. Although doubt exists whether an emetine-resistant strain of amoeba may be reproduced by repeated inadequate courses of treatment, there is little doubt that the relapse rate under these conditions will be high, and so during the first course of treatment every effort should be made to eradicate the infection.

The diagnosis of clinical intestinal amoebiasis is as unsatisfactory as that of clinical malaria, and the empirical use of emetine or emetine bismuth iodide in all cases of chronic diarrhoea is rightly condemned. Especially in the type of disease described in Italy with such vague general symptoms is it important to make an exact diagnosis by demonstrating the amoeba before starting a long unpleasant course of treatment. With the aid of the method of examining succeeding stools following a single purge as described in this paper and used in many hospitals in the C.M.F., it should be possible to make an exact diagnosis in nearly all cases of intestinal amoebiasis. Characteristic lesions seen with the sigmoidoscope should lead to a search for *E. histolytica* either by means of mucosal scrapings or by examination of the stools after purgation.

The diagnosis of amoebic hepatitis is nearly always a matter of considerable difficulty, and little help is obtained from stool examination, which gives positive results in only about 45% of cases (Manson-Bahr, 1940). The six cases of acute amoebic hepatitis treated all showed leucocytosis, tender enlargement of the liver, and fullness of the right lower chest, and responded to emetine injections. The diagnosis of chronic amoebic hepatitis usually has to be made on clinical grounds only. The finding of an enlarged tender liver in a patient giving a previous history of recurrent attacks of diarrhoea, with negative results from stool examination and sigmoidoscopy, is not

uncommon in this theatre. If marked subjective improvement and diminution in size of the liver follow the administration of a course of emetine injections the diagnosis of chronic amoebic hepatitis is probably the correct one. Frequently, however, the liver remains unchanged in size and the diagnosis is in doubt. Because of this difficulty it was decided to follow up the 103 cases with liver enlargement occurring in this series of 252 cases with positive stools. Thirty-seven of these were originally admitted with infective hepatitis, and the persistence of hepatomegaly long after the jaundice had disappeared led to a search for possible contributory causes and the discovery of a latent amoebiasis. All cases were afebrile, with a normal white count and sedimentation rate, and their failure to respond to emetine treatment made the diagnosis of amoebic hepatitis unlikely. A follow-up of this group of cases over a period of six months showed that no case developed an amoebic abscess and that in all but seven cases the liver had returned to normal size in three months without further anti-amoebic treatment. The course of these cases has been exactly comparable to that of similar cases of infective hepatitis with residual hepatomegaly in which no evidence of amoebiasis was found and no emetine was given. One patient with combined infective hepatitis and amoebic dysenæry with residual hepatomegaly died of intercurrent disease six weeks after he had completed his anti-amoebic treatment; histological examination of the liver showed no evidence of amoebic hepatitis and nothing to suggest that he had had a recent attack of infective hepatitis. Considering the large number (2,016) of cases of infective hepatitis admitted and the probable high carrier rate in troops exposed to amoebic infection, it is suggested that the association of these two diseases is accidental, and that the amoebic infection played no part in causing the persistence of the liver enlargement.

The cause of liver enlargement—usually two or three finger-breadths—in the remaining 66 patients who gave no history of preceding infective hepatitis remains uncertain. In addition to the vague general symptoms and mild recurrent diarrhoea typical of chronic amoebiasis, a history of aching pain in the right subcostal region, worse on lying on the right side, and a sense of fullness in the right lower chest, was often obtained. All of these cases were afebrile, with a normal white count and sedimentation rate. Aspiration of the liver gave negative results in all cases in which it was performed. In one-half of these cases the liver returned to normal size after a course of emetine injections, and the aching pain and sense of fullness in the right lower chest disappeared. In these cases the diagnosis of chronic amoebic hepatitis in association with intestinal amoebiasis seems justified. Diminution in liver size after emetine treatment in the remaining patients was no more than could be ascribed to a long period of rest in bed with a bland high-carbohydrate high-protein diet, and at the conclusion of treatment the liver remained slightly enlarged, firm, and often tender. These cases with persisting liver enlargement were down-graded, and were observed at base for a period of three to six months. At the end of this time all were in good health; none had suffered a relapse of amoebiasis or showed signs of liver abscess, but the liver was still undiminished in size. In view of the failure of the therapeutic test a diagnosis of chronic amoebic hepatitis seemed unjustified, and other possible causes were looked for. During the autumn of 1944, when many of these cases of amoebiasis occurred, there was a high incidence of infective hepatitis in the New Zealand Expeditionary Force, and it is known that many cases of "hepatitis without jaundice" occurred in which the prodromal febrile illness with digestive symptoms was not followed by the development of jaundice, although the liver became enlarged and tender. These cases ran a mild course and the liver returned to normal size in two to three weeks, so that it is unreasonable to ascribe the persistent liver enlargement in amoebic dysentery to a previous unrecognized attack of infective hepatitis. It is more probable that it is a chronic non-specific hepatitis related to the hepatitis sometimes found in association with chronic non-specific dysentery or in chronic diarrhoea. Whether it represents an early cirrhosis is a problem which might be solved by liver biopsy, and further observation of these patients over a period of years is indicated.

Clinically, chronic amoebic hepatitis and chronic non-specific hepatitis found in association with intestinal amoebiasis are usually indistinguishable. Thickening of the skin and subcutaneous tissues over the right lower chest wall without actual pitting oedema is often found in chronic amoebic hepatitis, and localized tender spots in the intercostal spaces over the liver would also point to this diagnosis. The distinction is largely academic; from a practical point of view it is important that any case of intestinal amoebiasis in which liver enlargement is found should receive a full course of emetine injections, and reliance in treatment should not be placed solely on drugs such as emetine bismuth iodide, quinoxyl, and carbarsone, which act only on the amoebae in the bowel wall.

The occurrence of vague abdominal symptoms in a soldier returning from an overseas theatre where amoebiasis is known to be prevalent should lead to the diagnosis of chronic amoebiasis being considered. These symptoms may easily be labelled functional in origin, as indeed they often are. The question of amoebiasis can be quickly settled by sigmoidoscopy and examination of successive stools after a brisk purgative has been given. If sigmoidoscopy shows lesions in the rectum and colon, and vegetative forms of *E. histolytica* are found in the stools, a full course of anti-amoebic treatment should be given. There is some doubt whether it is justifiable to institute a long and unpleasant course of treatment in amoebic "carriers," where the only positive finding is the presence of cysts of *E. histolytica* in the stools. As it is impossible to forecast which of these patients will, at some later date, develop amoebic hepatitis or liver abscess, it has been our practice to attempt to eradicate the infection with emetine bismuth iodide, quinoxyl, and carbarsone.

Summary

An account has been given of the cases of amoebiasis treated in a New Zealand General Hospital in Italy during the period July, 1944, to June, 1945.

True dysenteric symptoms were rare and were often associated with a bacillary infection. The disease was usually of the latent or chronic type, with recurrent mild attacks of diarrhoea and general symptoms of malaise, dyspepsia, and slight loss of weight predominating.

Tenderness and thickening in the region of the caecum were the most important physical findings. Liver enlargement was present in 103 cases, of which 37 had had a preceding infective hepatitis. Half of the remaining 66 cases were considered to have a chronic amoebic hepatitis, and the remainder a chronic non-specific hepatitis which did not respond to emetine.

70% of the cases showed abnormalities on sigmoidoscopy which were typical or suggestive of amoebiasis.

Considerable difficulty in demonstrating the vegetative forms of *E. histolytica* was encountered until we adopted the routine of examining all stools passed after vigorous purgation. Using the method described, a positive result could usually be obtained in one day.

Amoebiasis contracted in Italy responds well to standard methods of treatment, and the relapse rate is low.

Chronic amoebiasis should be considered as a possible cause of vague abdominal symptoms occurring in a soldier returning from an overseas theatre where amoebiasis is known to be prevalent.

I am indebted to the Director of Medical Services, 2nd New Zealand Expeditionary Force, for permission to publish this paper.

REFERENCES

Bomford, R. R. (1944). *J. R.A.M.C.*, **83**, 279.
Hargreaves, W. H. (1945). *Lancet*, **2**, 68.
Lamb, W. L., and Royston, G. R. (1945). Ibid., **1**, 455.
Leishman, A. W. D., and Kelsall, A. R. (1944). Ibid., **2**, 231.
Manson-Bahr, P. H. (1940). *Tropical Diseases*, 11th ed., London.
—— (1944). *Lancet*, **2**, 718.
Payne, A. M. M. (1945). Ibid., **1**, 206.

Middlesex County Council, in pursuance of a scheme approved in 1945 regarding the medical staffing of its hospitals, has just made sixteen senior medical appointments—five appointments of physician, seven of surgeon, three of pathologist, and one of radiologist. The salary attaching to the positions of physician and surgeon starts at £1,200 per annum and rises by annual increments of £100 to £1,800, and on proof of outstanding achievement and subject to the specific approval of the Council there may be further increments of £50 per annum up to a maximum of £2,200. For the positions of pathologist and radiologist the salary starts at £1,100, and rises by annual increments of £100 to £1,700, with further increments on a similar basis to those of physicians and surgeons up to a maximum of £2,000.

A CASE OF HYDATIDIFORM MOLE AT AGE 52

BY

A. H. CHARLES, M.B., F.R.C.S., M.R.C.O.G.
Visiting Physician, General Lying-in Hospital, London; late Adviser in Gynaecology, Middle East Forces

Apart from the advanced age of the patient this case does not present any remarkable features. It is not a record, for Feenders (1936) has reported a mole occurring in a multipara of 55. Vassbuch and Vermelieu as quoted by Sherman (1935) found twenty pregnancies in women over 50, five of whom had hydatidiform moles.

Hydatidiform mole occurs most often between the ages of 20 and 30, but if the total number of pregnancies occurring over 40 is considered hydatidiform mole appears two and a half times more frequently in this age group. Of the cases reported by Brews (1939) 37.5% were in women over 40, but 89.7% of Sherman's series of 78 cases from the Lying-in Hospital of the City of New York were under 40.

Most American authors are agreed that the best treatment for hydatidiform mole occurring in women over 40 is hysterectomy, particularly if they are multiparae. There is little reason to quarrel with this view when one considers the incidence of chorion-epithelioma after hydatidiform mole. Published figures show a wide variation in this incidence of from 5% to 31% (Nelms, 1939) (Brews, 8.3%). It does not seem reasonable to take a 1 in 10 chance of chorion-epithelioma developing in an elderly woman if she is fit for a radical operation when the mole is discovered.

Case Report

In March, 1945, a woman aged 52 consulted Major Matthews, R.A.M.C., on account of a blood-stained discharge of a month's duration. She had been married for 14 years and had one child, aged 11. In 1937 Fothergill's operation for prolapse was performed in England. In 1938 she had an abortion of a 2½-months gestation. A curettage was done after the abortion. In 1940 she had whooping-

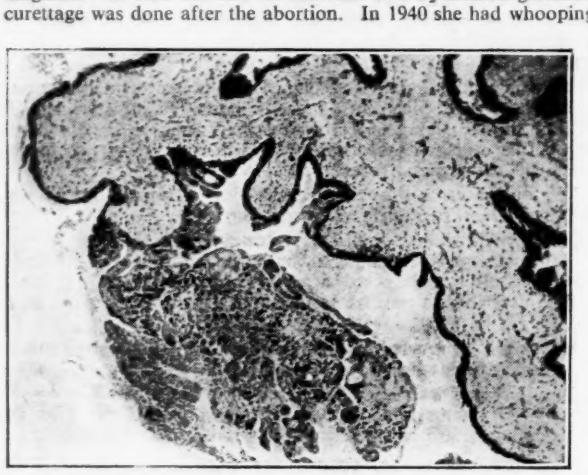


FIG. 1.—Photomicrograph showing oedematous villi.

cough, during which a painful swelling appeared in the abdomen and gradually disappeared—possibly a haematoma of the abdominal wall. Her menses began at the age of 10 and were regular 4–5/28. She had a normal period from Dec. 31, 1944, to Jan. 4, 1945; her next period began on the correct day, but the flow ceased after 24 hours; four days later a brownish discharge appeared, and continued for a few days without remission. Since then she had had a slight loss each day.

Major Matthews found an enlarged uterus, suspected carcinoma of the body of the uterus, and performed a diagnostic curettage. The report on the curettings was anaplastic carcinoma. He referred the patient to me owing to the limited surgical facilities in his locality. She was transferred to Cairo on March 10, and on examination a large soft uterus the size of a 10 to 12 weeks pregnancy was found. The breasts were negative.

The slides and the paraffin block were sent with the patient. Major Alan Morgan examined the slides. He could not confirm the original diagnosis, and cut further sections from the block, on which he submitted the following report: "The scrapings show evidence of conception, with numerous chorionic villi and sheets of decidual cells containing vascular spaces. The villi are enlarged owing to oedema of the central stroma (Fig. 1), the Langhans cells are frequently two layers in thickness, and syncytial cells show distinct proliferation. In my opinion this is not an adenocarcinoma, nor a chorion-epithelioma, and the swelling of the villi and chorionic proliferation are suggestive of a hydatidiform mole, possibly of the invasive type."

On March 13 examination under a general anaesthetic confirmed the previous findings; the cervix was easily dilated, and a pair of sponge forceps introduced through it withdrew typical vesicles, the largest being about the size of a pea. The cervix was closed with sutures after a gauze plug had been inserted. Total abdominal hysterectomy and bilateral salpingo-oophorectomy was then performed. The ovaries did not contain any cysts. Apart from some post-operative distension convalescence was uneventful, and the patient left hospital on the seventeenth day.

The tissue removed and the uterus were examined by Major Morgan, who reported as follows: "The curettings have the same microscopical appearances as given in the previous report, and con-

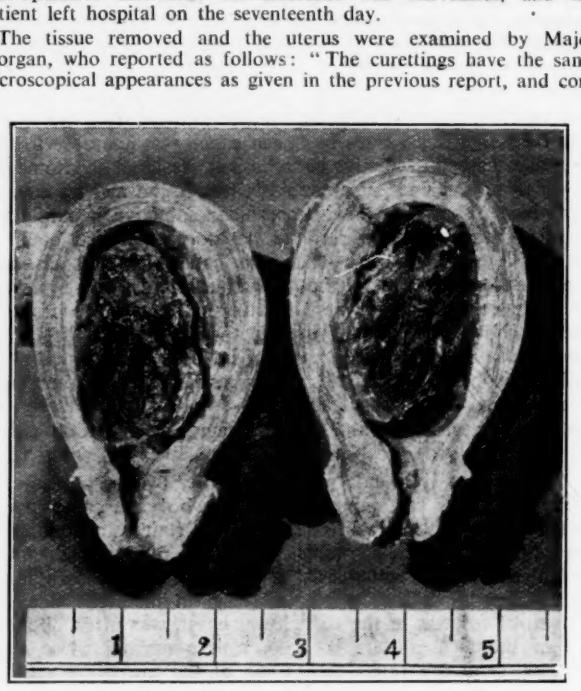


FIG. 2.—Sagittal section of uterus after fixation.

firm the diagnosis of hydatidiform mole. The uterus on sagittal section (Fig. 2) is packed with firm reddish tissue, probably a molar pregnancy, the size of a hen's egg. There is no macroscopic evidence of invasion of the uterine wall."

It is interesting to see how little the uterine contents were disturbed by the two explorations; the main mass is a firm coagulum of retained blood forming a fleshy mole in addition.

Two Friedman tests were performed after operation. In the first instance the rabbit died, but the second test, done on June 26, gave a negative result. *X*-ray examination of the chest showed no abnormality. The patient is well to-day.

My thanks are due to Major G. D. Matthews, F.R.C.S., M.R.C.O.G., for referring the case to me, and to Major Alan Morgan, M.D., for his pathological examination and the photographs.

REFERENCES

Brews, A. (1939). *J. Obstet. Gynaec. Brit. Emp.*, **46**, 813.
Feenders, H. (1936). *Zbl. Gynäk.*, **60**, 2308.
Nelms, W. F. (1939). *Brooklyn Hosp. J.*, **1**, 210.
Sherman, J. T. (1935). *Amer. J. Surg.*, **27**, 237.
Additional References:
Armstrong, M. V. (1939). *Amer. J. Surg.*, **44**, 544.
Giesen, J. E. (1941). *N. Zealand med. J.*, **40**, 3.
Mathieu, A. (1939). *Int. Abstr. Surg.*, **68**, 52 and 181. (In *Surg. Gynec. Obstet.* Jan. and Feb., 1939.)
Williams, T. J. (1943). *Amer. J. Obstet. Gynec.*, **45**, 432.

The Ministry of Health reports an increase in the number of cases of venereal disease. Last year 10,706 new cases of syphilis were treated at local authorities' clinics in England and Wales. This is 1,388 more than in 1944, and more than double the pre-war total. During the war the annual total rose steadily from 4,986 in 1939 to 9,642 in 1943. There was a slight improvement in 1944, when the figure was 9,318; but the 1945 total is the highest recorded for at least 14 years. The campaign of public education, carried out since 1942 by means of advertisements, posters, films, and exhibitions, is to be continued.

Medical Memoranda

An Unusual Complication of Thiouracil Therapy

There is little doubt in our minds that in the following case thiouracil caused the severe constitutional symptoms, which included prominent adenopathy on two occasions and pancreatitis in the second attack, which necessitated a laparotomy.

Mrs. A. was admitted to hospital on Nov. 7, 1945, with a diagnosis of angina pectoris, intermittent claudication, and cardiac infarction. Her symptoms, which had started three months before, were becoming increasingly severe. The blood pressure was normal. The electrocardiogram showed inversion of the T waves in leads II and III. She was nervous and excitable, but there was no evidence of thyrotoxicosis, and the basal metabolic rate was + 2%. She continued to have many short attacks of chest pain, usually brought on by excitement, and as rest and sedatives produced no improvement it was decided to try to reduce the number of anginal attacks by depressing the basal metabolic rate with thiouracil (Raab, *J. Amer. med. Ass.*, 1945, **128**, 249). Treatment was started with 0.2 g. three times daily, and this was uneventful for three weeks. The white cell count was maintained at 7,000 to 10,000 per c.mm.

On Jan. 29, 1946, she developed painful enlargement of the submandibular glands on both sides, with a temperature of 101° F. (38.3° C.). No other glands were enlarged, and the spleen could not be felt. The fauces were red, and there was an area of white exudate from which a smear demonstrated Gram-positive streptococci in short chains. A vesicular rash resembling cheiropompholyx appeared on the hands. The white cells numbered 7,200 per c.mm., of which 74% were polymorphonuclear neutrophils, 2% transitionals, and 24% lymphocytes. Thiouracil was discontinued and a course of sulphadiazine given. The temperature fluctuated between 100° F. (37.8° C.) and 102° F. (38.9° C.), and five days later it was 99° F. (37.2° C.); other symptoms, including the glandular enlargement, had abated, except for a dull epigastric ache which had appeared insidiously several days previously. Phenobarbitone, 1/2 gr. (32 mg.) twice daily, was continued throughout. It was not clear whether the fever, rash, and glandular enlargement were independent of the thiouracil. The exact origin of the swelling in the neck, whether from upper cervical lymph glands or submandibular salivary glands, was also uncertain because of its great size. Accordingly, thiouracil was restarted on Feb. 8 in doses of 0.2 g. four times a day. On the afternoon of Feb. 9 there was rapid and dramatic enlargement of the submandibular salivary glands, with sudden severe epigastric pain. Thiouracil was discontinued at once. Vomiting of bile-stained fluid occurred and several loose stools were passed. That evening the temperature was 101° F. (38.3° C.) and the pulse 88. The abdomen was rigid and tender, particularly in the epigastrium and also posteriorly over the upper lumbar spinous processes. There were no sounds on auscultation of the abdomen. The electrocardiogram showed no change, and a further coronary thrombosis did not seem likely. During the night her condition deteriorated, and there was no relief from the pain after morphine, atropine, and pethidine. The next morning the temperature was 102.4° F. (39.1° C.) and the pulse 104, and the pain was worse. Its site was the upper abdomen, and it spread to the back on the left side; signs of collapse were evident. There was no jaundice or cyanosis. Urinary diastase was within normal limits. Mesenteric lymphadenopathy, mesenteric thrombosis, and acute pancreatitis were all entertained as possible diagnoses, but as peritonitis could not be excluded the patient was immediately transferred for surgical treatment.

The only abnormal finding at laparotomy was a hard generalized enlargement of the pancreas, and the gland was swollen to about twice its normal size. There was no free fluid, nor was there any evidence of fat necrosis. The abdomen was closed and the patient made good progress after administration of intravenous saline and glucose. The submandibular glands subsided slowly and some abdominal discomfort remained for a time.

R. C. BARCLAY, F.R.C.S.
AUBREY LEATHAM, M.B., M.R.C.P.

Ascariasis Causing Acute Intestinal Obstruction

Round-worms are known occasionally to cause intestinal obstruction. The following is a case in point.

CASE REPORT

The patient was a female house-servant aged 45, and was admitted to hospital on Aug. 12, 1940. Five days previously she began to have spasms of colicky generalized abdominal pain, which doubled her up and caused her to cry out. These continued until the day of admission. She had lost her appetite and had vomited a few times, bringing up about fifteen round-worms, and had passed two with her faeces. There was no history of urticaria, cough, fever, or haemoptysis during the previous weeks. On examination she was thin and a little anaemic; nothing more abnormal was found except for slight general tenderness and a doughy feeling in the abdomen. Santonin 3 gr. (0.2 g.) and calomel 2 gr. (0.13 g.) were given on admission, followed later by 6 drachms (21 ml.) of castor oil and a belladonna and hyoscyamus mixture. The result was the passage of a large mass of tangled round-worms; this was followed by some relief of her symptoms.

On Aug. 14 the pain became very severe and was accompanied by vomiting. There were abdominal distension and a marked "ladder-pattern" of small-gut obstruction during each spasm. A diagnosis of acute intestinal obstruction caused by round-worms was made, and laparotomy performed forthwith under open chloroform and ether anaesthesia. A right lower paramedian incision revealed almost the whole of the small intestine distended with masses of coiled-up conglomerate round-worms. Two coils obstructed by especially large knots of worms were packed off, and through a small incision in the summit of each, guarded by a purse-string suture, 100 and 40 worms respectively were removed with long-pronged artery forceps. When no more could be removed from those portions of the gut the openings were closed. There appeared to be many hundreds of worms still left in the intestine. As the chief sites of obstruction had been dealt with, these were left alone and the abdomen was closed.

During the post-operative period there were slight suppuration of the wound, pyrexia (100–101° F. = 37.8–38.3° C.), general weakness, and, at first, some abdominal distension. Pituitrin and intravenous saline and glucose were given during the first day. Almost all the hair of her head fell out in the next few days. Anthelmintic treatment was recommenced on Aug. 18, repeated on the 21st and 27th, and on Sept. 1 and 3. (A change from santonin 3 gr. (0.2 g.) to oil of chenopodium 15 m. (0.9 ml.) was made on Aug. 27.) Each treatment yielded only a few worms. The patient insisted on leaving hospital on Sept. 3. When seen again on March 26, 1946, she appeared well nourished, was feeling very fit, and stated that she had had no more pain or other discomfort since leaving hospital; also that she had not passed any more round-worms. She had remained bald since the time of her previous illness.

COMMENTARY

With such a heavy infestation with round-worms it is curious that there was no history suggesting "ascaris pneumonia," nor of toxic manifestations such as urticaria. The diagnosis of the cause of the obstruction became fairly certain after the passage of the large mass of round-worms as a result of the first anthelmintic dose. It is surprising that no more worms were passed following post-operative anthelmintic treatment, and that after leaving hospital until she was seen again five and a half years later no more worms had been passed. The loss of hair was probably due to the effect of a severe illness, though under these circumstances it is usual for the hair to grow again. It should be added that the patient was of a somewhat eccentric mentality, which may explain both the gaps in the history and the almost certain eccentric eating habits leading to her heavy infection with ascaris, though there was nothing clear-cut in the dietary history to suggest how such a massive infection had come about.

D. LANDSBOROUGH, M.D., B.S.
General Hospital, Chuanchow, Fukien, S. China.

Carcinoma of Colon causing Acute Intestinal Obstruction in Youth of 17

Carcinoma of the colon in adolescence, without a history of familial polyposis, is uncommon, and the following case seems to be interesting enough to warrant publication.

CASE REPORT

A youth just 17 was admitted to the West Middlesex County Hospital in May, 1939, with a five-day history of colicky abdominal pains situated in the umbilical region and associated with absolute constipation. He had vomited several times on the two days before admission.

On examination gross tympanitic distension of the abdomen was found, but no mass was palpable and rectal examination was negative. He denied any previous bowel trouble; he had always enjoyed perfect health. A diagnosis of acute small-gut obstruction of uncertain aetiology was made, and laparotomy advised. A typical "ring" carcinoma of the splenic flexure was found, with gross distension of the proximal colon and small intestine. Caecostomy was performed. Three weeks later resection of the growth (Mr. W. J. Ferguson) was done, with end-to-end anastomosis, and subsequently the caecostomy was closed. He made an uneventful recovery. The operative diagnosis was confirmed by microscopy. On subsequent questioning no family history of colonic neoplasm could be elicited, nor could polypi be demonstrated in the excised specimen.

A carcinoma of the colon of the adult type was an unexpected operative finding. The previous history gave no clue as to the correct diagnosis, and failure to recognize it could, I consider, be excused. A further interesting point is the long survival after the resection, the patient being recently seen in perfect health some seven years after operation. This is contrary to the usual experience in intestinal cancer in the young, early recurrence being only too frequent.

J. SCHOLEFIELD, F.R.C.S.

Reviews

MYOMECTOMY AND OVARIAN CYSTECTOMY

The Technical Minutiae of Extended Myomectomy and Ovarian Cystectomy. By Victor Bonney, M.S., M.D., F.R.C.S., F.R.A.C.S. (Pp. 282; illustrated. 30s.) London: Cassell. 1946.

Probably no one of this generation has done more for the development of gynaecological operative technique than has Victor Bonney. Chief among the subjects with which his name will always be associated is the development of radical surgical methods (the Wertheim operation) for treatment of carcinoma of the cervix. But no less should he be honoured for his insistence on conservative surgery—when that is possible—for non-malignant gynaecological conditions, notably the substitution of myomectomy for hysterectomy, and ovarian cystectomy for ovariotomy. Perhaps because conservatism has less "news value" than radicalism, Bonney's achievements in this field have never received the notice they have undoubtedly merited; even to-day the ease with which ovarian cysts can be shelled out is not fully realized, and too often one hears of the needless sacrifice of ovaries, and even of complete castration, in young women.

In his well-known book written in conjunction with the late Sir Comyns Berkeley (*A Textbook of Gynaecological Surgery*) an excellent account is given of both myomectomy and ovarian cystectomy, but the discussion on these operations, and the details of technique, had of necessity to be compressed in order to maintain a balance with the other contents of the volume. This restriction Bonney has now removed by a new publication dealing exclusively with these two operations. In it the fruits of a ripe, and probably unrivalled, experience are presented with the author's customary vigour and enthusiasm. Every aspect of the subject is discussed, and no fewer than 241 line drawings—each made by the author himself—are included to illustrate the various manœuvres. These illustrations are specially noteworthy, for by them the author's meaning is conveyed with a greater directness and clarity than would be possible were the more "beautiful" type of medical illustration used.

That it is possible to conserve the uterus when massive fibroids are present, or when the tumours are so numerous that 100 or more are encountered, or when a large fibroid awkwardly distends the lower part of the cervix, may come as a surprise; so also may the conservation of ovarian substance when a cyst weighing 20 lb. or more is found to be filling the abdomen; yet all these events are recorded by the author, and their appropriate treatment is discussed. Of particular interest is a case in which 40 fibroids were removed, weighing in aggregate 21 lb.; and another in which 6 dermoids were removed—3 from each ovary—and the woman later became pregnant on two occasions. In all, the author records 806 personal cases of myomectomy with a mortality of 1.1%. Ovarian cystectomy he has performed 301 times without a death. Every type of operation—simple myomectomy in all its forms, multiple myomectomy, cervical myomectomy, caesarean myomectomy, block uterine excision, adenomyomectomy, and ovarian cystectomy—is depicted, and the means of dealing with almost every conceivable difficulty discussed.

This is a remarkable book and one which will take an honoured place alongside the already widely known *Gynaecological Operations*. To the gynaecologist its appeal is certain; to the general surgeon whose practice includes pelvic surgery it can be recommended as the best account we have seen of this highly important though strangely neglected field of conservative surgery.

DRUG ADDICTION

Narcotics and Drug Addiction. By Erich Hesse, M.D. Translated by Frank Gaynor. (Pp. 219. $3.75.) New York: Philosophical Library, 15, East 40th Street.

This book has been translated from the German, "published and distributed in the public interest by the Alien Property Custodian" in the U.S.A. It is a useful book of reference for those wishing to have available an account of the different substances which are commonly found to produce addiction. It contains not only pharmacological but chemical information, and a limited but well-chosen selection of cases illustrating the effects produced by the narcotic, and the results on the individual. All the opium derivatives are discussed together with artificial products like heroin and eucodal; cocaine, mescaline, hashish, and kava-kava are also considered. Not everyone knows that atropine and scopolamine have been used as intoxicants, and that muscarine from the *Amanita muscaria* has also: it produces an urge to keep talking incessantly. There is also a useful discussion on alcohol and tobacco.

While the effects of opium derivatives and of cocaine are well known, those of mescaline are less so. Heffter has given a description of its effect on himself. He lay down in a darkened room and closed his eyes.

"Despite the darkness, after-images were remarkably sharp and lasting. The after-images were frequently followed by series of pictures in gorgeous colours, some of them like carpet designs and mosaics, others showing intertwined coloured stripes moving at lightning speed. Colourful rays of intense brilliance shot across my dark field of vision, like projectiles from a firearm, but moving even at a higher speed. All colours were represented. These visions were followed by a series of beautiful landscapes, characterized primarily by a wonderful colour effect. Thus, for example, I saw the broadwalk of the Nervi beach; the branches of trees of a remarkably rich red colour hung over the walls. . . . Often I saw also the interior of richly decorated banquet halls, their walls, ornaments and chandeliers decorated with colourful jewels, opals and pearls. It was odd that the ceiling sometimes seemed to be down below, or hanging vertically at the side: this experience produced a violent vertigo and an increasing sensation of nausea. The visions disappeared as soon as I opened my eyelids. A very remarkable symptom was the loss of the sense of time; what I estimated to be half an hour was really just a few minutes."

There is also a useful account of the effect of hashish, or Indian hemp, given by Joel and Fraenkel, of which the following is an extract:

"One of the first signs indicating that the toxin is beginning to take effect is a dull sensation of premonition and uneasiness. Something strange, something inevitable seems to be approaching. Next, activity wanes, and a sensation of helplessness and anxiety may be experienced. If the addict yields to this state, he will soon realize that he is caught. Scenes and series of scenes of experiences long past flash on, entire scenes and situations are relived. First, they arouse interest, occasionally pleasure, and finally, when there is no escaping from them, tiredness and torment. And this compulsory state cannot be broken by saying to yourself: 'This is nothing but the effect of the toxin.'"

It is interesting to learn that the reputed aphrodisiac effect of hashish is produced only in orientals and not in white people.

JOB PLACEMENT FOR THE DISABLED

Job Placement of the Physica ly Handicapped. By Clark D. Bridges, Director of Conservation Services, Zurich Insurance Companies, Chicago. (Pp. 329; illustrated. $3.50 or 17s. 6d.) London and New York: McGraw-Hill Book Company, Inc. 1946.

A national scheme for the reablement and resettlement of our disabled workers is already with us; comment has been made in these pages upon the capabilities of the officials who will work the scheme, and upon the training they ought to receive. It is therefore appropriate and welcome to see a book which will go a long way to provide the basic knowledge needed by everyone, whether in Ministry or industry, who is asked to provide for disabled men but who has no grounding in medicine. But this is more than a textbook of medicine simplified. With good sense the author has included only those illnesses which most commonly occur, and his emphasis is upon the disability caused in each case, the conception of disability throughout being as optimistic as the facts will allow. Parallel to the descriptions of disease are analyses of the many physical demands which work may make upon a man in industry; his posture, his possible output of energy, his contortions, his environment, the dangers and toxic hazards he may have to endure, are each dealt with separately and defined as carefully as in any dictionary. This analysis is the basis of job-analysis, which all will agree we should postpone no longer. To assess a man as a working unit and to assess what his job will demand of him is the logical way of finding him satisfactory work and ultimate contentment. The doctor may know his man, the works manager and foreman may know the job, but it is time that each knew more of the opposite side of the problem; in this lies the value of the book. It is based upon field research,

and the wealth of material is presented ingeniously and with accuracy. Though it is evidently written with the close co-operation of medical men there is a tendency for the space allotted to certain diseases to exceed their relative importance, and others suffer thereby. On the whole the balance is good, for the field to be covered is uncomfortably wide. The American phraseology and the inclusion of references to United States laws and institutions should by no means discourage people in Great Britain from reading so valuable a contribution to the subject as this. Whatever his nationality, the problems of a handicapped man in a post-war industrial world must be much the same.

PSYCHOLOGY OF WOMEN

The Psychology of Women. A Psychoanalytic Interpretation. By Helene Deutsch, M.D. Foreword by Prof. Stanley Cobb, M.D. Volume I: Girlhood. (Pp. 312. 21s.) London: Research Books Ltd. 1946.

Dr. Helene Deutsch is a strict psychoanalyst and was a personal pupil of Freud. She has now set out to conduct a study of her own sex. The present volume, the first of the series, deals with girlhood studied along psychoanalytic lines. Here we have displayed, with case histories and narratives, the results of the Oedipus situation, castration complexes, penis envy, and of oral, anal, and urethral eroticism, which are the universal background of Freudian psychology. The book is persuasively and clearly written, and there is at least an apparent logical sequence between these mental adventures of the early years and the resultant manifestations of female eroticism, masochism, the "active" masculine woman, homosexuality, and the rest. There is no doubt that neurotic traits and some not so neurotic traits can be explained by tracing them to these emotional reactions of the young child; and, inasmuch as the patient is convinced of the validity of these explanations and is thus given a satisfactory face-saving device so that she can reorganize her attitude to life, she will be helped and perhaps cured; but that all behaviour, even all abnormal behaviour, is to be traced to these few common denominators is not so certain. However, full and prolonged psychoanalysis works; therefore where the physician and the patient have time to undergo the discipline it is entirely justifiable. Certainly every serious student of psychology should study the subject and its conclusions, but if he can help his patients to a better understanding of themselves and a greater security of emotional attitude by shorter methods so much the better for him and them. This book will therefore be useful to the knowledgeable but must not be taken too seriously by the uninformed.

GYNAECOLOGY FOR NURSES

Gynaeco ogy. A Handbook for Nurses. By Gladys H. Dodds, M.D., F.R.C.O.G. (Pp. 202; illustrated. 10s. 6d.) London: Faber and Faber. 1946.

Although the author states that "this book has been written to provide the nurse with the fundamentals of gynaecology," one gains the impression on reading it that this is rather a book for the specialist nurse or sister. In other words, there is too much detail in parts, and subject matter is included which is not entirely relevant. The chapters on ante-partum haemorrhage and pregnancy toxaemias should be excluded, and judicious pruning of ante-natal care and post-natal care would help to reduce the plethora of fundamentals that the student nurse has to assimilate. The gynaecological nurse is not a midwife, and here "a little learning" would be "a dangerous thing." Three operations are described for shortening of the round ligaments, but Bonney's pleating operation is not mentioned. Alexander-Adam's operation is seldom, if ever, done nowadays.

The book is well produced and the illustrations are excellent. The above criticisms do not condemn the book and the reviewer hopes they will serve to have the material groomed into a minimum of valuable data from the nurse's point of view.

Notes on Books

A Guide for the Tuberculous Patient, by Dr. G. S. ERWIN, was noticed with warm approval in this column when it first appeared in 1944. A second edition has now been published by William Heinemann Medical Books, Ltd., at 3s. 6d. New sections have been added on "nerves," social statistics, and aviation. In no other disease of common occurrence is the intelligent co-operation of the patient more necessary. Dr. Erwin's little book will save the physician's time and advance the patient's understanding.

HANNS SACHS, author of *Freud: Master and Friend* (Imago Publishing Co.; 9s.), was a member of that inner circle which gathered round Freud and were largely responsible for the spread of the doctrines formulated by the master all over the world. This biographical sketch—it is no more—is admittedly a panegyric of the father of an increasingly large family, but it is pleasantly and most sympathetically written and gives the reader an excellent picture of the genius who was so extravagantly execrated and perhaps as extravagantly praised by learned men and others throughout civilized society. Freud's rigid adherence to what he regarded as first principles is described, and it explains his apparent intolerance of those who differed from him and broke away from the original circle to become bitter critics and opponents. The final chapters give a moving picture of Freud's fortitude in bearing these defections and later the ravages of a painful and fatal malady needing repeated severe operations and culminating in persecution and exile. It is gratifying that this country afforded him asylum and such peace as was possible in the last days of a really great man.

Atlas to Surgical Approaches to Bones and Joints, by TOUFICK NICOLA (New York: The Macmillan Company; 25s.), consists of a series of simple but adequate diagrams of the bones and joints which are accessible to surgery. The diagrams are skilfully conceived and well drawn, and descriptions are cut down to a minimum. It will be difficult to imagine a better exercise for the student than to copy the diagrams, while from the point of view of the demonstrator of surgical anatomy the book is a gold mine.

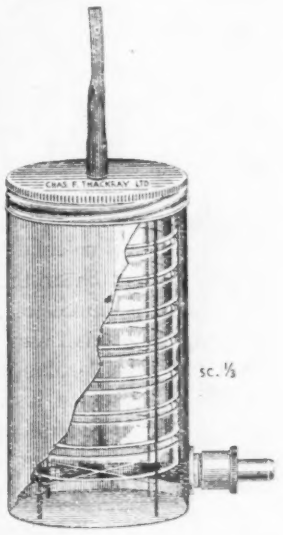
Preparations and Appliances

A CONTAINER FOR THE CULTURE OF GONOCOCCI IN CARBON DIOXIDE

Dr. JOHN A. BURGESS, V.D. Officer, West Riding County Council, writes from Wakefield:

The usual laboratory methods of culturing gonococci in an atmosphere containing some carbon dioxide are unsuitable for use in venereal disease clinics where culture plates are often inoculated and placed in the incubator by the nursing staff. The container described below has been found to be simple and satisfactory in use at a venereal disease clinic. It occupies a comparatively small space in the incubator and is economical in the amount of carbon dioxide–air mixture used.

The container consists of a cylindrical tin box measuring 103 mm. in height by 75 mm. in diameter. It has a quarter-turn screw-on air-tight lid through which has been fitted a small brass tube with a rubber outlet valve similar to the type found in double bellows. Inside the container there is a wire rack which will hold 8 Petri dishes (each 60 mm. diameter by 12 mm. deep). The side of the container near the base has a brass tube fitting, with an inlet valve of the same type as that on the lid.



Method of Use.—The culture plates are inoculated in the usual way and placed in the wire rack. The latter is inserted into the container and the lid screwed on. The inlet tube at the base of the container is then connected to a rubber tube from a gas cylinder containing 8% carbon dioxide in air. Sufficient of this gas mixture is run in to displace all the air in the container (approximately 400 ml). The CO_2 mixture being heavier than air displaces the latter upwards and out through the outlet valve. The tube from the cylinder is then disconnected and the container placed in an incubator at 36° C. for about 48 hours. At the end of this time the culture plates are removed and sent to the laboratory for examination.

The container has been made for me by Messrs. C. F. Thackray, Ltd., Leeds, from whom similar containers can be obtained.

BRITISH MEDICAL JOURNAL

LONDON

SATURDAY SEPTEMBER 28 1946

CARE OF THE CHRONIC SICK

The Institute of Almoners is a relatively new body incorporating the Institute of Hospital Almoners and the Hospital Almoners Association. A suggestion made by Sir Ernest Rock Carling was taken up by the Institute early this year, and a questionary on the care of the chronic sick was addressed to almoners at the 350 hospitals throughout the country which provide an almoner service. An analysis of the replies received bears out the view of Dr. Sturdee and Lord Amulree[1]: "Not only is the problem of the treatment of the chronic sick not being met, but most people do not realize that there is a problem."

Almoners everywhere report a disturbing lack of accommodation for the chronic sick and particularly for those suffering from inoperable cancer. In Carlisle "there are available only six female and six male beds for the chronic sick." Municipal hospitals at Hull "are now so overcrowded that it is difficult in some of them to get a dressing trolley between the beds." Other accounts reflect an administrative dilemma. Either patients die miserably at home or they occupy for months, or even for a year or longer, beds intended for more acute cases. Where there is accommodation either in municipal hospitals or in public assistance institutions it is too often in "old workhouses" or in "a grim, depressing, and ill-cared-for place," or else in "out-of-date buildings, quite unsuitable for the purpose of nursing patients who need especial care, in surroundings calculated as far as possible to give them confidence and cheer them in their last illness." Proper segregation is impossible and cases of inoperable cancer may be in one small ward with senile patients, noisy mental cases, and even "isolation cases from the maternity ward." In public assistance institutions conditions seem to vary greatly, and in general provision is "for the senile rather than the sick, and even less for the suffering." A further disadvantage is the old Poor Law stigma which still clings to so many of these places. This is especially the case in those areas where admission can be obtained only by application to the relieving officer, and according to one account "relieving officers have not always the right attitude." Another administrative difficulty is "the law of settlement, which may prevent a patient being transferred from a voluntary hospital outside his county direct to a public assistance institution without at least one night at home." The same difficulty arises when a patient has to go to the hospital which serves the district in which he lives, even though it may not be nearly so easy of access as a nearby hospital administered by a different Public Assistance Committee. Fair comment on the combined effects of lack of accommodation, difficulties about administrative areas, and often justifiable dislike of such poor accommodation as is available is provided by a Godalming report which concludes: "fortunately she died here sooner than expected." The gloom of this and other case histories is not relieved by such background figures as the daughter who had a "nervous breakdown from the strain of nursing him"; a wife "worn out with nursing him at home and ill herself"; a husband who nursed his dying wife until he was in debt, "in danger of losing his job" and "in a completely exhausted state."

The picture presented by the Institute of Almoners is not all black. In some few areas there are both voluntary and municipal hospitals making more than adequate provision for at least some of their chronic sick. Others are well cared for at their own homes by district nurses. Almoners were practically unanimous in describing their local district nursing associations as efficient and co-operative. The home help service seems to be developing, though slowly and somewhat feebly and only in the larger towns. The problem of the chronic sick is a real one and one that is not likely to grow less. It seems possible that by 1950 there will be five million people[2] in Great Britain over the age of 65. Their needs are many and it is not easy to visualize any one scheme which will meet all of them. There is probably a place for homes and hospitals for the dying in any scheme that may be devised. There are a handful of such homes scattered throughout England and Wales where those who are in the last stages of illness have preference over those who still have some capacity for living. Their great disadvantage is the depressing effect on both patients and relatives of this segregation of the dying. But for selected patients who are aware of their condition the special care and attention that can be given to them at such homes is of value. As Cunningham Dax and Reitman[3] pointed out recently, there is an increasing need for special psychiatric hospitals for the aged where with proper treatment, especially in the affective group, rehabilitation can be achieved in a fair proportion of cases. There is a need, too, as Mungo Park[4] suggested, for infirmaries where the simple types of senile dementia who are not in need of special psychiatric treatment could be looked after. The same applies to elderly patients suffering from cancer who have passed the stage where they might benefit by treatment but still need a great deal of nursing. Probably such patients could best be cared for in an annexe to a cancer hospital. Fractures in the elderly need much more than orthopaedic attention, but might well form a special group within the orthopaedic department. Much the same arrangement of a block or a single ward for any type of chronic sick might profitably be arranged within each and every department of the larger hospitals. Sir Alexander Macgregor suggested to the Glasgow Corporation in 1944 that 10 to 20% of the total beds of general hospitals should be allotted to chronic sick. Most hospitals tend to give priority to acute cases

[1] *British Medical Journal*, 1946, **1**, 617.

[2] *Dudley Committee's Reports*, 1944, H.M. Stationery Office.
[3] *British Medical Journal*, 1946, **1**, 736.
[4] Ibid., 1946, **1**, 549.

and to discharge or transfer the chronic sick unless they are of special interest for teaching purposes.

These considerations apply to one large group of the elderly chronic sick. Another group needs only an expansion of existing district nursing facilities. Yet another would be more than content with a regular home help service. Others still could look after themselves in well-designed hostels with only occasional nursing or medical supervision. All these groups merge imperceptibly one into the other and all of them may need at some time expert diagnosis and treatment. They overlap, too, the increasingly large section of the population which is not old and infirm but merely old. The problem of the chronic sick is closely related to that of provision for old persons generally. Clearly, men and women who are old and sick and not likely to recover are just as deserving of the best kind of care as those for whom there is hope of recovery. The provision of that care will tax the administrative ingenuity and the clinical and nursing skill of all concerned, even assuming a more humane, enlightened, and individual outlook towards the chronic sick than has hitherto been manifest. The creation of an adequate and comprehensive scheme to cover these needs is becoming urgent.

BRITISH-SWISS MEDICAL CONFERENCE

The Swiss Academy of Medical Sciences last week entertained a large number of British medical men and women at a British-Swiss Medical Conference held at Basle. Those who were fortunate enough to be present will long cherish the memory of a week which, for the British visitors, passed all too quickly in a city which blends the old and the new in an architectural unity of surpassing charm and vigour. Of the new, the British visitor took home with him an impressive recollection of the new university building completed during the war, and more especially of the Bürgerspital, which was opened last year. This new building is a landmark in hospital development and by contrast shows up the deficiencies of so many of our own institutions. But what struck the British guests even more than this lovely city untouched by war was the sincere friendliness of their Swiss hosts and the Swiss people, the sense of unity they had with British democracy, the eagerness and anxiety with which they had watched the fall and rise of our fortunes of war, the feeling, perhaps, of obligation felt by the Swiss nation towards Britain, which in its victory had preserved the democracy of Switzerland. In his thoughtful address of welcome to the Congress Prof. Edgar Bonjour, Rector of the University of Basle, stressed the elements common to both countries. "What counts with both people alike," he said, "as the only genuine goal of all political exertion is not might but freedom, the rule of law, justice, and moderation. This system fully recognizes the overwhelming importance of the individual, with whom every renewal, and therefore also every culture capable of establishing permanent values, ultimately begins. In both States the individual is constitutionally safeguarded against the encroachments of the multitude."

The relations between Basle University and England are described with much point and interest by Prof. Bonjour in an article published in a special edition[1] of the *Schweizerische Medizinische Wochenschrift* to commemorate the Conference—an edition which includes in full the papers read at the scientific sessions, and short illustrated articles on the medical schools and faculties of Great Britain and Ireland; an edition, moreover, which in its format and printing is worthy of the high tradition of one of the oldest centres of printing in Europe. The University of Basle was founded in 1460. In the Basle matriculation rolls of the sixteenth and seventeenth centuries "one is amazed to discover," writes Prof. Bonjour, "how many English names which figure there have left their mark on history." Perhaps one of the most interesting links between England and Basle is to be found in the person of that mocker of human folly—Erasmus of Rotterdam. Intense individualist and lover of personal liberty, he found England and Basle two places congenial to his temperament. He completed his New Testament at Cambridge and had it printed at Basle, where he died. At Basle, also, two men famous in medical history threw down their challenge to authority. The turbulent Paracelsus burnt the works of Galen and Avicenna in the market-place, and from the printing presses of Basle came the *De Fabrica* of Vesalius in 1543. Familiar enough to Britons is the Basle-born Holbein, whose pen-and-ink sketch of Sir Thomas More and his family is one of the treasures of the Basle Art Museum.

The Conference last week enabled the Swiss—in particular the Baslers—and the British to renew once more their centuries-old friendship. Our Swiss colleagues reminded us on more than one occasion of the intellectual isolation into which the war of 1939–45 had placed them and welcomed this occasion for the exchange of information and ideas. A first summary of the papers read at the meeting appears elsewhere in this week's *Journal*. The British speakers and subjects were chosen by a committee under the auspices of the Royal Society of Medicine, to whose efficiency in organizing the British side of the Conference we would pay tribute. A varied intellectual fare was provided for our Swiss hosts and showed, we may believe, that in spite of our preoccupation with practical issues during the war years fundamental research in medical science was pursued with vigour. Our Swiss colleagues in return gave in full measure of the fruits of their work. If the Swiss have suffered intellectual isolation during the war we on our part have been isolated from the graces and comforts of civilized life, and these we found in abundance in the generous hospitality of our hosts and in the intellectual and physical amenities of Basle and Switzerland—a welcome refreshment of mind and body. Among the places of interest visited not the least were the chemical factories for which Basle is famed and in which the devices of modern technology have reached such a high pitch of application.

It is not possible here to mention by name the many Swiss doctors who in so unobtrusive a fashion gave freely of their time and energy to making the Conference the outstanding success it undoubtedly was. It will not, however, be invidious if we refer especially to Prof. Karl Wegelin, the President of the Swiss Academy of Medicine, who,

[1] 1946, **76**, Nos. 37/38.

urbane and witty, was always apt to the occasion with well-chosen phrases in good English, whether at the scientific sessions or at the Banquet in the hotel on the bank of the Rhine. He was ably seconded by the Secretary-General of the Academy, Prof. A. Gigon, chief editor of the *Schweizerische Medizinische Wochenschrift.* It was to Prof. Gigon that the idea of such a conference occurred, an idea which he did not relinquish until it took shape; and once it had taken shape he did not cease to labour at all the many details of organization which make or mar a meeting of this kind. It is to be hoped that the time will not be long before we in this country will be able to make a fitting return by entertaining Swiss doctors on British soil.

STREPTOMYCIN

Antibiotics[1] are substances elaborated by micro-organisms which act as antibacterial or antifungal agents. It is attractive to postulate that these substances are formed by their producers as a defence mechanism. They have often a very marked, specific, antibacterial effect against important human pathogens.

Penicillin,[2 3] which is a wholly British discovery, is the most successful antibiotic so far exploited therapeutically, but there remain many organisms pathogenic to man which are insensitive to penicillin and the sulpha drugs, or demand for effective control of the infection doses so large as to be toxic to the host. It is customary to reserve the term antibiotic for a substance of natural origin and to exclude from this designation synthetic antibacterial substances such as the sulpha drugs. Gramicidin[4] is an antibiotic finding increasing favour in surface wound dressings, but streptomycin,[5] an American discovery, is showing great therapeutic promise in combating Gram-negative bacilli and *Mycobacterium tuberculosis.* Penicillin is a purified metabolite of the aerobic culture of the green micro-fungus *Penicillium notatum* (Westling's original culture was made from the decaying herb hyssop from Norway), and streptomycin can be somewhat similarly made by filtration of the product of aerobic culture of the ray fungus, originally isolated from soil, *Actinomyces (Streptomyces) griseus* (not to be confused with either the human disease actinomycosis or with streptococci). It was found, by its isolator Waksman's collaborators,[6] to have a wide and intense potency in animals, and after a very few months of scattered American biochemical effort the pure base and crystalline salts were prepared. It is thought significant that penicillin—an acidic substance—should have maximal action on Gram-positive bacteria and that streptomycin—a base—should have maximal action on the Gram-negative series.

The pharmacological development of streptomycin in America is proving very like that of penicillin in England, and, as the first few clinical observations with crude concentrates showed such promise, the American Streptomycin Clinical Trials Committee, under the chairmanship of Dr. Chester Keefer (Harvard), has been set up to control location and method of clinical trials and to assess results before the general release of the substance. The Committee buy the entire output (some 35 kg. a month in May, 1946) of the ten firms who have subscribed $500,000 to the Committee for this purchase. Similar controlled clinical trials are about to start in England under the aegis of a committee appointed by the Medical Research Council to exploit the pilot-scale production of streptomycin which is being organized by the Ministry of Supply.

It is too early to assess accurately the American clinical results, but it is almost 100% effective in tularaemia (rabbit fever), which though rare in England gives rise to some 1,000 serious cases a year in U.S.A. In the residuum of bacterial infections of the urinary tract which are insensitive to penicillin and/or sulpha drugs considerable success has been reported ranging up to 100% elimination of *B. proteus* and *B. pyocyaneus.* In tuberculous meningitis great promise has been shown, though residual nervous or hydrocephalic lesions often remain, and all strains of *Mycobacterium tuberculosis* seem sensitive in some degree. In pulmonary tuberculosis, for which probably the minimal effective trial period may be 5 years, Dr. Corwin Hinshaw (Mayo Clinic) and Dr. Walsh MacDermott (New York) report considerable therapeutic possibilities with streptomycin in extension of Dr. Feldman's Mayo Clinic demonstration of its value in experimental guinea-pig infections. (Penicillin will, of course, tend to repel some of the secondary bacterial invaders in the tuberculous pulmonary lesion.) Treatment is a great trial to the tuberculous patient, because it involves at present some six daily injections of the equivalent of about 600 mg. of the pure base, over perhaps six months. Cost has to be considered, with the present price of the substance at about $15 a gramme and the lowest likely price in full production falling to $5 a gramme, but if this is weighed against the long sanatorium treatment and even longer subsidy for the patient and his dependants it is hardly significant. Dosage is to be calculated by dry weight of base, equilibrated against the standard powder of 1,000 units per mg. potency, but this introduces the slight complication that the soluble salts (hydrochloride 842 units, sulphate 798 units per mg.) have a lower unitage than the base. Plague and leprosy are other diseases in which the effect of streptomycin is being investigated. Streptomycin, though rather more costly than penicillin, is more stable in aqueous solution and dry form, and it can be heat sterilized. Being relatively stable at acid *p*H levels it would survive passage through the stomach, but it has so far not been possible to give effective treatment by mouth (a very desirable route) because adequate concentrations cannot be maintained in the blood, probably owing to simultaneous excretion and absorption from the gut.

It is important to stress that a complete and final opinion on the therapeutic value of streptomycin, particularly in tuberculous infections, cannot be expected yet, and that streptomycin is unlikely to be available either in America or England for use outside the official trials for some time. The unwary philosopher may ask himself whether, with streptomycin complementary to penicillin, there will be any pathogenic bacteria for human beings to die of in the Brave New World.

[1] Oxford, A. E., "Antibiotics," *Annual Review Biochemistry*, 1945, **14**, 749.
[2] Fleming, A., *Brit. J. exp. Path.*, 1929, **10**, 226.
[3] Florey, H. W., *et al.*, *Lancet*, 1940, **2**, 226.
[4] Dubos, R. J., *J. exp. Med.*, 1939, **70**, 1.
[5] Waksman, S. A., *et al.*, *Proc. Soc. exp. Biol.*, **1944**, **55**, 66.
[6] Waksman, S. A., *et al.*, *Science*, 1944, **100**, 103.

CIVILIAN DEATHS FROM AIR BOMBARDMENT

The Statistical Bulletin of the Metropolitan Life Insurance Company for July, 1946, contains a useful article, under the above heading, which summarizes the available data. British civilian loss of life amounted to something over 60,000 deaths, more than two-thirds in the first "blitz" between August, 1940, and June, 1941. French losses were almost as heavy, nearly 54,000, more than two-thirds of them in 1944. In proportion to population the Netherlands suffered more than any other ally; 30,000 are estimated to have perished in the dastardly raid on Rotterdam. No figures seem to have been available with respect to Russia and Poland; Norway lost 1,000 lives. The Axis Powers

paid heavily for their choice. The United States Strategic Bombing Survey estimates German losses at over half a million, and Japanese losses as between 360,000 and 375,000; the two atomic bombs are thought to have killed about one-third of this total, 105,000 to 120,000; but the most destructive single raid is thought to have been that on Tokyo on March 9, 1945—the estimate is 85,000. These are statistics of deaths alone. In time a medical and statistical study of all the effects of air raids, mental as well as corporal, will no doubt be made. The psychological effects have been, perhaps, less serious than was expected before the attacks began, but a comprehensive study requires leisure.

DR. OLIN WEST

The centenary session of the American Medical Association will be held in Atlantic City in June next year. Already plans are afoot to make it "the greatest medical assemblage that the world has ever known." At its annual meeting, which took place this year at San Francisco, the House of Delegates unanimously appointed Dr. Olin West as President-Elect. This is a remarkable tribute to the man who has been Secretary to the A.M.A. for the last twenty-four years.

Olin West graduated from Howard College in Alabama, practised at Nashville, and was instructor and later associate professor in the medical department of Vanderbilt University. In 1910 he became director of the Rockefeller Sanitary Commission and the International Health Board in Tennessee, a position which he held for eight years. Then from 1918 to 1922 he was secretary and executive officer of the Tennessee State Board of Health. It was at this stage, following the death of Dr. Alexander Craig, that Dr. West became Secretary to the A.M.A. Later he combined the functions of Secretary with those of General Manager. Dr. George F. Lull, of Chicago, has now succeeded Dr. West as Secretary.

At San Francisco the address of the President-Elect was a characteristic compliment to the staff of nearly 700 whose activities he had directed for so long, and concluded with a statement on the importance to America of "an untrammelled and idealistic profession." Dr. West's unopposed election to the presidency of the A.M.A. and the ovation which greeted his presentation to the House of Delegates were a well-merited recognition of the steadfast manner in which he has supported the ideals and dignity of the profession in the United States for a quarter of a century.

RAG FLOCK

Rag flock is manufactured mostly from strips of cast-off clothing and carpets. This material is collected mostly by rag-and-bone men, who go from house to house with a barrow and scavenge for the material in tips and dumps. Considerable amounts of material are imported from abroad, particularly from the East, including used Army clothing, underclothing, surgical dressings, and sleeping-bags. The rags may be cleansed, but dirty flock can be produced at a cost of about £5 a ton less than that which has been washed. Manufacturers who carry out their obligations are therefore at a serious disadvantage. The rags, washed or unwashed, are dried and then disintegrated in a laniator (laniate means "to tear to pieces"); the rags are conveyed on a belt to a rapidly revolving cylinder studded with steel teeth, which tears them into shreds, and they emerge from the machine a fluffy resilient mass. The flock is used in the manufacture of bedding and upholstery. There do not appear to be any authenticated cases of infectious disease from mattresses filled with dirty rag flock, but the risk may be assumed to exist. In any case it is undesirable that anyone should have to sleep on unclean bedding. There is also a risk to the health of the workers who handle the flock, apart from the presence of vermin in it.

An attempt to control this material was made in the Rag Flock Act, 1911; the Rag Flock Amendment Act, 1928; and the Public Health (London) Act, 1936 (Section 136); but an inadequate definition of rag flock and too small penalties for contravention of the law have defeated the intention of these Acts. An Interdepartmental Committee was therefore set up in 1938 to make recommendations to ensure proper cleanliness of rag flock used for the manufacture of upholstery, bedding, and other household furniture in Great Britain. Its report and recommendations are now published.[1] These include the registration of all premises used for the manufacture of rag flock and inspection by local authorities. It is further suggested that it would be wise to apply these regulations to premises in which any kind of filling material is used.

THE REHOUSING OF BRITAIN

The five-figure totals in the latest housing returns issued by the Ministry of Health appear encouraging, as all big figures are apt to do, but they have to be measured by the dire need of housing brought about by war damage and by the cessation of building for six years. In England and Wales, up to the end of June, 12,000 new permanent houses and over 30,000 temporary houses had been put up; 20,000 unoccupied houses had been requisitioned for residential purposes, and many thousands of existing premises had been converted and adapted for family units. The new permanent houses under construction numbered over 100,000 and the temporary houses nearly 22,000. Nearly half a million operatives, excluding prisoners of war, are engaged in tackling the housing problem. The Midlands stands highest in the number of houses completed, and the north-western area—Lancashire and Cheshire—in the number under construction. In London something like 94,000 war-destroyed or war-damaged houses have been or are in process of being rebuilt, repaired, and made habitable.

The Ministry's housing returns, presented to Parliament just before the recess, give all these figures and many more; but to the departmental statistician a house is just a house, and no hint is given as to size, type, or position. When a huge demand is being met by mass-production the tendency is to be impatient of any variation of pattern, and, for anything we know, all these thousands of houses which are coming into view, whether they are built by housing authorities or under licence by private builders, may be six-roomed boxlike dwellings, suitable to a family of three or four. According to the last census nearly 22% of the family units in this country consisted of two members, and this proportion is not likely, with a diminishing birth rate, to have lessened since 1931. What is being done for the housing accommodation of single persons and of old couples? The widespread provision of a standard size of house to meet the needs of families which vary widely in size will create new social problems.

We announce with much regret the death of Dr. T. Watts Eden, consulting obstetric physician to Charing Cross Hospital and consulting surgeon to Queen Charlotte's and to the Chelsea Hospital for Women.

[1] *Report of the Interdepartmental Committee on the Rag Flock Acts*, Ministry of Health and Dept. of Health for Scotland, 1946, H.M.S.O. Cmd. 6866, Price 9d.

CONDITIONS DESIRABLE FOR THE RAPID PROGRESS OF GERONTOLOGICAL RESEARCH

BY

V. KORENCHEVSKY, M.D.*

(From the Gerontological Research Unit, Oxford)

The conditions necessary for the *rapid* progress of gerontology are much the same as those required for the rapid advance of any abstruse problem of science or medicine. In the first place the very great difficulty of the problem of ageing must be strongly emphasized. It is as difficult as, or perhaps more difficult than, the splitting of the atom, provided that the aim of gerontology is fully faced. This aim is not only a longer life but a stronger one—" to add life to years, not just years to life "—not only prevention of the premature appearance of senile decay but also elimination of those pathological features which are not necessarily associated with normal old age, since they are not present in some rare cases of less pronounced pathological ageing. As ageing starts very early, actually with the *normal* process almost the whole of the span of human life will be changed, and therefore in some distant future man will probably become in some respects a different creature.

In short, science and medicine confront the task of preventing the present definitely premature and pathological ageing.

Here, however, is another great difficulty, because we do not know what are normal ageing and normal old age, what is a normal span of life, and for how long in normal ageing wear and tear could be prevented in different organs and tissues. Moreover, the basic elements and conditions of normal life, such as proper nutrition, are most probably still very far from ideal in spite of the truly remarkable progress in this field of physiology and medicine.

At the present time, in geriatrics (the medical treatment of old age) the greatest pitfall appears to be the temptation to use stimulating compounds only, of any origin and structure, in order to prevent pathological ageing (Dr. Voronoff's glandular grafts, hormones, Prof. Bogomoletz's reticulo-cytotoxic serum, etc.). The danger and disadvantages of these geriatrical methods are twofold: (*a*) A *degenerated* old tissue or organ cannot stand vigorous stimulation, just as a tired horse, when whipped to do extra work, cannot withstand the strain and suddenly collapses from heart failure. (*b*) The causes, producing decreased function or morphological changes of certain organs and tissues and acting from elsewhere, are not removed by stimulating these organs. Therefore with such treatment the basic causes of ageing of organs or tissues will still be present and will continue to produce fatal effects.

The " elixir of life " appears to consist mainly in elimination of all abnormal causes of ageing, and not in the use of stimulating compounds only. This statement, however, should not be misunderstood. Of course, various stimulating compounds (vitamins, hormones, etc.) are naturally present in the organism, and their absence or decreased production might also become one of the important causes not only of premature ageing but of death. Therefore their role in geriatrics might be very important and, in some cases of deficiency of these compounds, be not only rejuvenating to a certain degree but might actually save the life of the organism. With regard, however, to the general basic causes of ageing and the respective approaches to their treatment, it is important to allocate a proper place to stimulants and urge their correct application in geriatrics.

Taking into consideration all the enormous difficulties of gerontological and geriatrical research *involving all branches of science and medicine*, the following conditions appear to be necessary for a *rapid* advance towards a solution of this vital problem of humanity:

(1) Just as in the case of the splitting of the atom, co-operative research work of scientists and medical men of all civilized countries is necessary. With this aim in view, the Club for Research on Ageing has been established with branches already formed in England, U.S.A., France, Denmark, Sweden, and Switzerland; branches in other countries are in a state of formation or, as we hope, will soon be established.

(2) Large funds must be available for financing gerontological research in all its manifold aspects. The grants, given for a few years, will not tempt many research workers to become specialists in gerontology and geriatrics, since any clinical and experimental research scheme on ageing necessitates some years of careful work. For example, it takes about 2½ years to breed old rats before starting any experiments on them. Besides, the research worker has to think about his future and that of his family.

(3) The establishment, in each major country, of an Experimental and a Clinical Institute for Research on Ageing.

(4) The formation of a sufficient number of groups of gerontologists and geriatricians in each civilized country. Obviously points (2) and (3) are essential for this purpose.

(5) The continuation of the policy of interesting in gerontology different existing biological and medical laboratories and research hospitals so that they devote at least some of their efforts and time to research on ageing. Co-operation between scientific bodies and municipal hospitals and infirmaries for old people is most desirable, as the experience of the British Branch of the Club has shown in the case of co-operation with the London County Council. Long-term grants, of at least five years' duration, are necessary in these cases. Experience has also already shown that voluntary workers without remuneration, and " temporary gerontologists " (i.e., those who have agreed to do some gerontological research for a few years only), are often not to be counted upon for any length of time because of the call of their direct duties or the acceptance by them of permanent posts elsewhere.

Summary†

For the *rapid* advance of gerontology and geriatrics the following conditions are desirable: (1) Co-operative research work of scientists and medical research workers in civilized countries. (2) Large funds for financing this research. (3) The establishment of experimental and clinical Institutes for Research on Ageing in major countries. (4) The formation of groups of research workers in gerontology and geriatrics. (5) Large long-term grants to existing scientific and medical laboratories and research hospitals who will agree to start gerontological or geriatrical research work.

* An address to the first conference of the British Branch of the Club for Research on Ageing, held on July 16, 1946, at the Imperial College, London.

† All statements in the summary have been approved by the conference of the British Branch of the Club for Research on Ageing as expressing the views of the conference, and have been passed as resolutions by the conference.

BRITISH-SWISS MEDICAL CONFERENCE

INTERNATIONAL MEETING AT BASLE

A British-Swiss medical conference, organized jointly by the Swiss Academy of Medical Sciences and the Royal Society of Medicine, was held during the week beginning Sept. 16. About 150 members of the medical profession, largely representative of the medical faculties of the universities, travelled from Great Britain to Basle, where they were received with the most generous hospitality by their Swiss hosts, who, to about the same number, attended the conference.

The opening meeting was held in the fine hall of the Natural History Museum and the other sessions in one of the theatres of the University. Twenty-four papers were read, fourteen of them by British authors, and the remainder by professors or directors of departments in the universities of Basle, Berne, Zurich, Lausanne, and Geneva. The great majority of the Swiss speakers delivered their papers in English, and for members of the audience who could not follow the language a system of simultaneous interpretation was organized. The text of all the papers was published in a special number of the *Schweizerische Medizinische Wochenschrift* and a copy was presented to every visitor. Alike on the social and scientific side everything possible was done, under the guidance of Prof. A. Gigon, secretary-general of the Academy, to make the sojourn of the visitors in this historic and dignified city, untouched by war damage, pleasurable and stimulating.

Cultural Relations

The President of the Swiss Academy of Medical Sciences, Prof. C. WEGELIN, in welcoming the visitors, mentioned that an invitation had been sent to Mr. Winston Churchill, who was visiting Switzerland, to attend the opening ceremony. He was unable to do so, but sent his best wishes. They had greatly desired to see Mr. Churchill, said Prof. Wegelin, because of their admiration for the way in which he had stood like a rock against Nazi aggression. He referred to the long history of cultural relations between Great Britain and Switzerland. Such names as Harvey, Sydenham, and Jenner were honoured among the Swiss. During the war the Swiss had felt the liveliest sympathy with the British people in their sacrifices and had mourned especially the isolation of cultures. To help to bring that isolation to an end and to abate the psychological disturbances which the war had left behind was the aim at the back of their meeting.

The British Minister in Switzerland, Mr. P. M. SNOW, followed on the same lines. Switzerland and Great Britain were divided during the war, but it was a physical division only; spiritually they had never been divided. He mentioned the names of a number of men of science who had both British and Swiss affinities. LORD AMULREE attended to bring the blessing of the British Minister of Health and spoke of various directions of advance in social medicine, especially in respect of the problems of the care of the aged. The Swiss Minister in London, M. RUEGGER, a member of the Federal Council, Dr. ETTER, and a representative of the Basle civic authorities endorsed the welcome.

Finally the rector of the University, Prof. EDGAR BONJOUR, spoke of the close alliance of the Swiss and British medical professions. It belonged, he said, to the best traditions of Basle and of Switzerland to promote the international exchange of the treasures of culture. Basle stood at the intersecting point of important arteries of communication and on the frontier of old cultures. To re-establish internationalism in a world where so much had been destroyed was to her a task of capital importance. Herein she adhered to the good old tradition of *Helvetia Mediatrix*.

"During the world war that has just terminated England has drawn support from her great prestige of earlier centuries. We in Switzerland felt for the fate of England with all our hearts, rejoicing in her victories with a gasp of relief. What made the greatest impression on us was the spiritual power which enabled England to triumph in the end. We admired the way in which, through many anxious years, the men of science and learning resisted all temptations to lose heart and never betrayed the mind."

The Task of Reconstruction

Mr. J. B. HUNTER, of King's College Hospital, acknowledged the welcome on behalf of the British visitors, and described the great tasks of reconstruction which now awaited the British universities. The health services of Great Britain, he said, were also in the process of reorganization, calling for much physical and mental readjustment, but it was hoped that as a result new facilities for research would come into being. The various Faculties of Medicine were sure that present difficulties would be overcome and that progress in the future would be as steady as in the past.

Dr. ALAN N. DRURY, for the British Organizing Committee, recounted the circumstances which gave rise to the conference. The first move was a letter by Prof. Gigon to Sir Henry Dale, who took the matter up with warm sympathy. Prof. J. H. DIBLE spoke on behalf of the scientific societies in Great Britain which had co-operated in the event. In an eloquent plea for the conception of the social and spiritual duty of medicine he referred to the contributions of the ordinary research worker and clinical observer. In the extension of knowledge it happened now and then that some genius constructed a viaduct or laid a long stretch of permanent way, but in the main progress came about through the steady plodding labour of innumerable workers.

First Scientific Session

After these allocutions the scientific work of the conference opened with an address, delivered in German, by Sir HUGH CAIRNS on head injuries in the second world war. It was a recapitulation of what has appeared under his name in the *British Medical Journal*. He illustrated the design of the crash helmet, which, he said, had reduced the number of head injuries and modified the effects of concussion. He claimed that crash helmets had reduced hospital admissions by 50%, fractured skulls by 75%, and the prolonged amnesias following injury by 66%. He stated that long bed-rest was not essential to the after-care of head injuries; a short bed-rest of a few days, together with graduated physical exercise and psychological treatment, was more effective. He also discussed surgical intervention in compound injuries of the anterior fossa of the skull.

This and a number of subsequent papers were discussed together at a special meeting under the chairmanship of Sir HENEAGE OGILVIE. Sir Hugh Cairns, in reply to questions, said that the weight of the crash helmet was 900 g., and it was quite comfortable to wear. He thought there was a case for making it compulsory for motor-cyclists.

In the afternoon, with Sir LEONARD PARSONS presiding, Prof. LUZIUS RUEDI, of Berne, discussed acoustic trauma, its origin and prevention. He divided acoustic trauma from the functional point of view into two groups: (1) noise trauma, together with trauma associated with certain blunt head injuries, and (2) explosion trauma; and he indicated the pathological grounds upon which the special place occupied by the latter could be supported. A number of experiments on the human and animal ear were described which led to certain new conceptions of the physics of the internal ear. The observations, he said, appeared to confirm the hypothesis that all natural sounds such as industrial noises or explosions had a broad frequency spectrum which in a cochlea gave rise to certain pairs of eddies. These opposing eddies changed direction at a range of frequency of 4,500 cycles per second, so that at that point the basal membrane was exposed to great tension which might result in permanent damage. He also demonstrated a new ear defender, an outer shell covering the whole ear and studded with tiny holes, thus forming a resonator whose resonating frequency was very much damped down. With this instrument, on a pistol shot the pressure amplitude was diminished by about 1:10. The protective function of the ear defender had been tested both on guinea-pigs and on human ears.

Circulatory Failure

The final paper of the session was given by Dr. JOHN MCMICHAEL, of the British Postgraduate Medical School, who discussed circulatory failure. The failing human heart, he said, responded like the overloaded heart in Starling's heart-lung preparation. Mechanical reduction of venous pressure led to improvement in cardiac function. He stressed the importance of the pressure-reducing action of digitalis in bringing about improvement in cardiac output. In ordinary cases of heart failure the aim should be to bring down the venous pressure to normal as soon as possible. Within half an hour it was known what result was going to be obtained with digoxin, and if the venous pressure did not come down altogether to normal as a result of digoxin, theophyllin ("cardophyllin") should be given, and if these two measures were not enough, resort should be made to venesection. These procedures could be followed one after the other, and the clinical results were well worth while. The aim was to carry out all these measures if necessary in order to bring the venous pressure down, and the measures were quite safe and painless.

At the subsequent discussion meeting Dr. McMichael's paper called forth a considerable amount of comment. Asked why he used digoxin instead of strophanthin, and whether the one was superior to the other, Dr. McMichael said that he did not know why digoxin was used, but his chief at the British Postgraduate Medical School, Sir Francis Fraser, never used strophanthin, although it was introduced into therapeutics by his father, Sir Thomas Fraser, of Edinburgh. He had tried to find out why strophanthin was so much emphasized in American literature, and he learned that when Vaquez put digitalis on a frog heart it stopped in diastole, but when he used strophanthin it was arrested in systole; on that subtle difference it was supposed that strophanthin acted on the muscle, so that if an effect on the myocardium was desired, strophanthin was used. Dr. E. ROTHLIN said that the frog was not a good experimental animal; it reacted in the reverse way to the cat, and usually in

Switzerland, as in Great Britain and America, they standardized on the cat.

Stilboestrol

A crowded audience listened to an exposition by Prof. E. C. DODDS on oestrogens in cancer. He referred chiefly to the treatment of prostatic cancer by stilboestrol. The result of the introduction of oestrogens, he said, had been a widespread tendency to "dose" with stilboestrol everybody who had any type of cancer, but a careful examination of the claims showed in almost every case an absence of justification for the widespread use of this and its sister substances in the treatment of carcinoma in general. The interesting fact did appear, however, that in inoperable carcinoma of the breast some 5% of cases received a definite benefit, varying from a slight improvement in the local condition to a tendency of a fungating carcinoma to heal, and in a few cases to the disappearance of the lesion. But in the treatment of carcinoma of the prostate the results were clear-cut. The opinion of expert urologists of most countries was that such patients should be treated with stilboestrol, though even here it was in no sense a cure; it was a control, a means of palliation, lasting for varying lengths of time, in some cases for the whole five years over which the observation had extended, and sometimes only for six months.

In some later discussion on Prof. Dodds's communication Dr. J. MCMICHAEL pointed out that the patient with cancer of the prostate very frequently had no very definite prostatic symptoms. He might arrive at hospital with symptoms due to secondary deposits, and an examination of the prostate by means of *x* rays might show calculi, which possibly co-existed with carcinoma. A diagnostic measure which had been suggested was the administration of testosterone, 50 mg. daily, upon which the acid phosphatase level, if it had not already risen, would steadily rise. In one patient the answer was clear: there was a steady rise of acid phosphatase level, which fell as soon as administration ceased, and this patient, after being given stilboestrol, was able to leave hospital. But in another case the response to testosterone injection was very irregular, falling while injections were continued, and rising to a peak after they were stopped. This patient also was put on stilboestrol, but went downhill quickly and died with massive secondaries about four months later. Sir HENEAGE OGILVIE said that he had the impression that the Americans were now preferring castration to stilboestrol.

The Kidney in Infancy

Prof. R. A. MCCANCE, of Cambridge, discussed the physiology of the kidney in infancy. For some time after birth the kidney did not function as in adult life. The excretion of water was adequate for normal requirements, but defective by adult standards; the osmotic pressure of the infant urine was low, and only rose to adult levels when the serum became highly abnormal. The glomerular filtration rates in infancy appeared to vary with the hydration of the body, whereas in adults they were relatively constant, so that quite mild hydration in an infant was almost equivalent to acute renal failure, and, finally, the urea and mineral clearances in infancy were very low. It must be obvious, said Dr. McCance, that this work had great clinical applications, because if the infant, newborn or in early life, was so incapable of regulating the constancy of the internal environment it was clearly for paediatricians to do their best to maintain, and if necessary to restore, such constancy in their patients. But no one could say how much water and how much salt must be given to the next dehydrated baby he was called upon to treat; such decisions could be made only at the bedside.

Sir LEONARD PARSONS said that this paper was important because it stressed an aspect of physiology which had received little study. The physiology of the newborn infant was different, just as its anatomy was different, from that of the older child or adult. In reply to a question by Prof. ROLF MEIER, Dr. McCance said that the adrenal cortex was extremely hypertrophied at birth, and he had often wondered whether the hormone excess secreted by the gland at that time might not be the cause of the oedema seen in premature babies, but he had no evidence to that effect.

Sympatheticotropic Drug Action

A most interesting paper on the differentiation of sympatheticotropic drug action was read by Prof. MEIER, who is the head of the pharmacology department of Basle University. From an investigation of a large series of such compounds—phenylethylamines, phenylpropylamines, and others—he came to the conclusion that their type of action was identical in only a few cases; mostly there existed marked qualitative differences, especially in blood-flow reaction. Instead of classifying substances generally, therefore, as "sympatheticotropic drugs," their several effects throughout the system should be considered as differentiated with higher or lower specific affinity for some part of the sympathetic system.

Dr. E. ROTHLIN, of Basle, considered that what was needed was a real definition of sympatheticomimetic drugs. Adrenaline, the most effective product in the group under review, was a sympatheticomimetic drug; on intravenous injection there was a rise of blood pressure, but if the blood pressure rose 20 or 30 mm. Hg, it was counterbalanced by a parasympathetic action which, on the heart and vessels, was stronger than the direct action of adrenaline. If an intravenous injection of ephedrine were given the blood pressure rose much more than with adrenaline, but there was no parasympathetic action. There must be a very big difference between adrenaline and ephedrine, yet both were sympatheticomimetic. The question of classification badly wanted clearing up.

Pulmonary Tuberculosis and High Altitude

Dr. J. E. WOLF, of Davos, discussed the effect of altitude in the treatment of tuberculosis. High altitude—meaning heights of 4,000 to 6,000 ft. (1,200 m. to 1,800 m.)—exercised partly a stimulating and partly a sedative influence on the tuberculous patient. The increased power of resistance induced in tuberculous patients after a stay at a high altitude was partly due to a change in the vitamin metabolism.

Another Swiss tuberculosis expert, Prof. E. GRASSET, of Geneva, described some work on tuberculosis in virgin stock (a South African population). The moral of a long discourse was the usefulness, in view of the impossibility of controlling the bacteriological and epidemiological conditions of primary tuberculous infection, of the "pre-munition" method which substituted for the virulent invading germ an avirulent one such as the B.C.G. With improvements such as the percutaneous inoculation method, "pre-munition" had entered a new and promising phase.

Amputations

Mr. GEORGE PERKINS, president of the British Orthopaedic Association, gave an exposition of amputation. Unless the surgeon could guarantee a stump which would satisfy the requirements of the limb-maker, he should plan to perform two operations—a provisional amputation, followed at a later date, when the requirements could be met, by a definitive amputation at a higher level. On Syme's amputation Mr. Perkins said that few would decry it when cleanly performed by the experienced surgeon. It was not a question of whether the Syme was a good or a bad amputation, but whether the results in the hands of the average surgeon justified recommending it as a suitable amputation for the "greenhorn." It was of no use relying on the good sense of the surgeon, because he did not know his limitations. The technique of the definitive operation which he described was based on two considerations: (1) amputations were of necessity performed by all manner of surgeons, so that there was much to be said for a simple technique applicable to all four main amputations, and (2) the technique chosen should conform to the wishes of the limb-fitting surgeon, who alone knew what sort of stump best stood up to the stress of limb wear. From the limb-fitting surgeon they learned that in the ideal stump the scar was not exposed to pressure and was not adherent, the skin was not infolded, there was no redundant soft tissue and no projecting spur of bone, the stump was not tender, and the wound had healed by first intention.

Sir HENEAGE OGILVIE said that the paper raised some controversial points. Most surgeons, he thought, if they themselves required an amputation would "pray that their friends would do a Syme before sending them to Roehampton." Mr. Perkins appeared to be of opinion that a "below-knee" was as good as a Syme and less trouble. But the Syme did not need a prosthesis. The below-knee amputation seemed to presuppose that the men would be for the rest of their lives under the care of the Government, which would supply them with whatever

ECONOMY

Rapid Haemoglobin gain with only 3 'Plastules' daily

Three 'Plastules' Plain is the suggested daily dose for secondary anaemias. Small, easy to take, and well tolerated, this modern iron therapy is favoured by the physician who desires effective treatment at a reasonable cost to the patient.

PLAIN • WITH HOGS STOMACH

'PLASTULES'

BRAND *Hæmatinic Compound* REGD.

Exsiccated Ferrous Sulphate B.P. 5 grns. Dried Yeast ½ grn. Excipient, sufficient quantity.

JOHN WYETH & BROTHER, LIMITED, Clifton House, Euston Road, London, N.W.1

(Sole distributors for Petrolagar Laboratories, Ltd.)

LIVINGSTONE MEDICAL EDINBURGH PUBLISHERS

New Medical Books

CHILD AND ADOLESCENT LIFE IN HEALTH AND DISEASE
By W. S. M. CRAIG, F.R.S.(Edin.), M.D., F.R.C.P., B.Sc. 684 pp. 202 illustrations. 25s.
* "Prof. W. S. M. Craig has performed a service of national importance by compiling, after a long period of careful study, this excellent treatise . . . undoubtedly a most valuable work."—BRITISH MEDICAL JOURNAL.

DEMONSTRATIONS OF OPERATIVE SURGERY FOR NURSES
By HAMILTON BAILEY, F.R.C.S. 356 pp. 531 illustrations, many in colour. 21s.
* "This book should be studied by every medical student."—BRITISH JOURNAL OF SURGERY.

PRACTICAL CHEMISTRY FOR MEDICAL STUDENTS
By WILLIAM KLYNE, M.A., B.Sc.(Oxon.), with a Foreword by Professor G. F. Marrian, D.Sc., F.R.S. 476 pp. 20s.
* This book has been written primarily for medical students, but contains some novel features which may be of value in other chemistry courses of intermediate standard.

AN INTRODUCTION TO BACTERIOLOGICAL CHEMISTRY
By C. G. ANDERSON, Ph.D., Dip. Bact. Second Edition. 20s.

GYNAECOLOGICAL ENDOCRINOLOGY FOR THE PRACTITIONER
By P. M. F. BISHOP, D.M.(Oxon.). 7s. 6d.

FOOD AND NUTRITION
By E. W. H. CRUICKSHANK, M.D., D.Sc., Ph.D., M.R.C.P. 16s.

AN INTRODUCTION TO CLINICAL NEUROLOGY
By GORDON HOLMES, M.D., F.R.S. 12s. 6d.

SURGERY OF THE HAND
By R. M. HANDFIELD-JONES, M.C., M.S., F.R.C.S. Second Edition. 20s.

THE PERIPHERAL CIRCULATION IN HEALTH AND DISEASE
By ROBERT L. RICHARDS, M.D. 21s.

INJURIES OF THE KNEE JOINT
By I. S. SMILLIE, O.B.E., M.B., Ch.M., F.R.C.S., F.R.F.P.S. 35s.

EXTENSILE EXPOSURE APPLIED TO LIMB SURGERY
By ARNOLD K. HENRY, M.B.(Dubl.), M.Ch.(Hon.) Cairo, F.R.C.S.I. 30s.

INTRODUCING..

The Ritchie-B.N.I. Electronic Nerve Stimulator

FOR DIAGNOSIS AND THERAPY OF NERVE AND MUSCLE INJURY

For your Electro-Medical Research and Practice Requirements write to:—

General Radiological Ltd, 15/18 Clipstone Street, London, W.

R.M.20

EVANS

This proteolysed liquid liver extract meets the need of those who do not tolerate or respond to liver by injection

HEPATEX
ORAL

for the treatment of pernicious anæmias, including *refractory* anæmia, pernicious anæmia of pregnancy, sprue and nutritional anæmias

Issued in bottles of 4 fl. oz.

One fluid ounce contains the anti-pernicious anæmia activity equivalent to at least one lb. of lightly cooked liver

Literature gladly sent on receipt of request

Made in England by

Evans Medical Supplies Ltd

Speke LIVERPOOL 19 — Bartholomew Close LONDON EC1

PENICILLIN . . .
in Ophthalmology

Applying Penicillin eye drops

ACUTE superficial bacterial infections of the eyes respond rapidly to treatment with Penicillin in the form of eye drops, and also as an ointment. Excellent results have been obtained in the treatment of styes, blepharitis, conjunctivitis, hypopyon ulcers and ophthalmia neonatorum.

A copy of our booklet entitled "Penicillin Therapy" will gladly be sent upon request

Boots

MEDICAL DEPARTMENT
BOOTS PURE DRUG CO. LTD
NOTTINGHAM ENGLAND

BB166-96

X-RAY

The solus Electrical Co. Ltd.

7, 9, 11, Stanhope St., London, N.W.1

Designers and Manufacturers of

X-RAY APPARATUS

for Diagnostic and Fluoroscopic work

DEEP THERAPY Apparatus

also

Medium and Superficial Therapy.
X-Ray Couches. Screening Stands and Portable Sets, and All Accessories.

X-RAY TUBES AND H.T. CABLES

We Solicit your Enquiries

'Phone EUSTON 5596 EXRASOLUS 'Phone London

MERSALYL B.D.H.

(Injection of Mersalyl B.P.)

The use of Mersalyl B.D.H. should constitute the primary treatment whenever it is necessary to induce prompt or prolonged diuresis. Supplementary treatment, when necessary, may be varied according to the individual needs of the patient. In cases in which there is cardiac involvement, digitalis may be given collaterally. Debilitated patients who may be unduly susceptible to toxic effects of mersalyl should be given Vitamin C B.D.H. to minimise toxicity and to augment the diuretic effect. Patients with liver involvement should be given Dehydrocholin B.D.H. in order to prevent hepatic injury by the mercury compound and, as in the case of vitamin C, to increase the diuretic effect. Further details will be gladly supplied on request.

B.D.H.

THE BRITISH DRUG HOUSES LTD. LONDON N.1

Mrsl/E/25a

Two advances in Opiate Medication

DILAUDID

TRADE MARK *dihydromorphinone* BRAND

Improved Morphine Preparation

Whilst the analgesic power of "Dilaudid" is five times as great as morphine its hypnotic effect is considerably weaker. The euphoric element is largely subdued and addiction risk correspondingly lowered. Tolerance is improved, an increase of dosage rarely necessary. The effect on peristalsis is slight and much less persistent than with morphine.

DICODID

TRADE MARK *dihydrocodeinone* BRAND

Powerful Antitussive

Occupying a place midway between morphine and codeine, "Dicodid" exerts a selective influence on the cough centre. Better tolerated than morphine, it also interferes very much less with expectoration. Causes no constipation.

Literature and samples on request

KNOLL LTD.,
61, Welbeck Street, London, W.1
Sole Distributors: **Savory & Moore Ltd.,**
26, Lawrence Road, Tottenham, N.15

procedure was necessary. But the man on whom the Syme operation had been done, even if he went to the ends of the earth, could always make his own prosthesis. His own feeling was that the Syme operation, even if it meant re-amputation in seven or eight years, was the operation of choice for injuries in which that amount of foot could be saved.

Acclimatization to Heat

The subject of man in relation to his environment was taken by Dr. E. A. CARMICHAEL, of Queen Square Hospital, London, but he had time only to deal with tropical climates. When exposed to a hot environment men reacted differently according to their previous experience. The process of acclimatization or adjustment required from 4 to 7 days, by which time approximately 80% acclimatization had occurred. He emphasized the need for taking fluid in a hot environment. A man might lose as much as 10 litres of sweat a day, which meant 50 g. of salt. If replacement was restricted to fluid, without taking account of salt, there was a tendency to heat cramp. Recent work at Cambridge had shown that breakdown occurred at an earlier time and at a lower level for psychological than for physical efficiency. On the subject of clothing for the Tropics, he said that experiments with various garments had shown that a closely woven cotton fabric was more to be recommended than open-mesh poplins. A point to be considered also was the desirability of making people in the Tropics drink more than was actually necessary to alleviate thirst.

In reply to a question Dr. Carmichael said that in air-conditioning in the Tropics it was well not to reduce the temperature to the levels obtaining in a temperate climate.

Prof. MCCANCE pointed out that large numbers of people in the Tropics were living in a state of dehydration. The only stimulus to make one drink was thirst, and in the Tropics water was lost so quickly that that stimulus was never quite sufficient to enable the individual to drink himself back to normal. This had not been appreciated by those who had to live and work in the Tropics and to handle men there. Sir Heneage Ogilvie said that this was also a great problem in desert warfare. The liability to shock was greater and the resistance to infection much less if little water was available. Sir P. MANSON-BAHR said that a queer aspect of the problem was the existence of some animals in Africa—antelopes and gazelles—which lived from one year's end to another without any water at all. There were also geographical questions to be considered. How was it that heat stroke was much more common in the Irak area than anywhere else—for instance, in western Libya—where the conditions were much the same?

Nutrition in Switzerland

Prof. ALFRED FLEISCH, of Lausanne, described the state of nutrition in Switzerland during the war. One of the tables he exhibited showed the total mortality and the mortality from certain intestinal diseases:

Annual Mortality per 100,000 inhabitants

	1934–38	1939–43	1944	1945
Total	1,154	1,136	1,200	1,160
Deaths due to digestive disorders ..	72	62	63	64
Deaths due to gastric and intestinal ulcer	7·5	8·3	9·7	10·0
Deaths due to appendicitis	12·5	9·4	7·2	—

During the last six years in Switzerland rationing had covered nearly all important food products. It had been well organized, with the minimum of "black market," and during the war years the amount of food had been diminished little by little to a level which was plainly below the theoretical minimum. The results suggested that the large amounts of calories, proteins, and fats formerly considered optimum in Switzerland, as in England and the United States, were not necessary. Instead of the 2,400 calories daily claimed by the League of Nations for adults not doing special manual work, 2,160 calories daily seemed sufficient. In particular the large quantities of fat consumed before the war were unnecessary and even injurious. For a long time paediatricians had admitted that somewhat scarce feeding was better than over-feeding, and this was as true for adults as for children.

Sir LEONARD PARSONS challenged this last statement; it was not true of British and American paediatricians. Certainly if a child was fed on a rather larger diet than normal it grew more quickly, and, bone formation not keeping pace, there might be some rickety tendency; but to say that a child was better on a starvation diet, or something approaching it, was not correct.

Prof. MCCANCE said that it was interesting that Prof. Fleisch should have found seasonal variations in haemoglobin—a maximum in summer and autumn and a minimum in spring. There were also quite striking seasonal changes in the ability with which adults absorbed calcium—the majority absorbing it much better in summer than in winter. The reason was obscure, but it was not due to insufficiency of vitamin D. There was too great a disposition to regard the human being as "aseasonal."

Experimental Diabetes Mellitus

Prof. F. G. YOUNG, of University College, London, gave an account of experimental diabetes mellitus in depancreatized animals. It was almost certain that the human disease was not a single syndrome with one cause; it must consist of a number of different conditions arising from various causes, but with the majority of symptoms in common. The anterior pituitary gland almost certainly ranked as an extra-pancreatic factor of importance in a proportion of cases. Despite the extensive investigations since the classical work of von Mering and Minkowski, the causes of diabetes mellitus in all its forms were still unrevealed.

In the ensuing discussion it was mentioned that children born of diabetic mothers were often larger than children born of normal mothers, and this obtained even in children whose mothers did not develop diabetes until five or ten years after the child was born.

Another interesting paper was presented by Prof. A. VANNOTTI of Lausanne, on the adaptation of the human organism to effort, altitude, and to pathological oxygen deficiency. He said that to a prolonged deficiency of oxygen the organism reacted not only through a modification of respiratory and circulatory mechanisms, but also through reactions at the tissue level where the purpose was to facilitate the transport of capillary blood oxygen. He discussed a number of observations which, he said, demonstrated the clinical and other importance of the cellular system of biological catalysers, the insufficiency of which was able to exert unfavourable consequences upon the organism. Prof. Vannotti was highly complimented upon his paper by the British physiologists present. Any extended reference to the other papers must await a subsequent issue. They included an excursion into the therapeutic possibilities of the new discoveries in nuclear physics, by Dr. J. S. Mitchell; a discussion on normal and defective fat absorption, by Prof. A. C. Frazer; the chemotherapeutic control of malaria, by Prof. Hamilton Fairley; the rhesus blood groups, by Dr. R. R. Race; arterial injuries, by Mr. Mason Brown; a paper on child health, by Prof. C. McNeil; a demonstration by Sir Reginald Watson-Jones on surgical rehabilitation, and Dr. Donald Hunter's "popular lecture," delivered at Rheinfelden Spa, on industrial medicine in Great Britain. As the President of the Swiss Academy, Dr. Wegelin, said in closing the conference, the subjects taken had embraced the whole of medicine. They had not been confined to a few narrow specialisms. The difficulty was to bring so wide a range into focus. Dr. Wegelin added that if he were not an old and retired professor he would go to England as a student of medicine.

The names of many of the British visitors have been mentioned in the foregoing account. Others who were present included:

Dr. C. Shattock, Prof. John McGrath, Prof. David Campbell, Prof. C. Bruce Perry, Prof. A. W. M. Ellis, Prof. John Cruickshank, Prof. J. Henry Biggart, Dr. Douglas McAlpine, Prof. L. P. Garrod, Prof. Sydney Smith, Dr. H. A. Clegg (*British Medical Journal*), Dr. G. H. Macnab, Dr. N. Howard-Jones, Sir John Fraser, Sir P. Manson-Bahr, Dr. S. Cochrane Shanks, and Dr. J. M. Graham.

The Swiss Academy paid a compliment to their English visitors by asking one of them to preside over each session, and the respective chairmen were Sir Leonard Parsons, Dr. R. A. McCance, Prof. R. St. A. Heathcote, Dr. Alan Drury, Sir Heneage Ogilvie, Dr. C. E. Newman, and Prof. A. St. G. Huggett.

At a conference banquet held at the Hotel Drei Könige, which was attended by the President of the Canton of Basle and other Swiss notabilities, Prof. WEGELIN, who presided, again expressed his pleasure in the occasion, and showed an appreciation of the medico-political situation in Britain when he said that the shackling of the free activities of medicine by the State was not to be tolerated. The Dean of the Medical Faculty of Basle, Prof. LUTZ, spoke in praise of the international commerce of medicine, and a general practitioner, Dr. OTTO LEUCH added a few words as representative of the Swiss Medical Federation, a small sister, he said, of the British Medical Association. Sir HENEAGE OGILVIE replied for the guests and offered their congratulations upon the splendid organization of the Conference.

Those attending the Conference learned with much regret that Mr. J. B. Hunter had been taken seriously ill after the opening sessions, and had been taken to a nursing home. On the final day of the Conference it was announced that he was going on as well as could be expected.

Correspondence

Postgraduate Education and the Health Service: Training the Specialist

SIR,—Those of us who hold that all is not well with the system of training of the future specialist in Great Britain will welcome Sir Francis Fraser's plain statement (Sept. 14, p. 354) that "the holding of a responsible hospital appointment does not of itself suffice," and his plea for a more positive training in which the working conditions have the setting of an intellectual background. Sir Francis goes on to suggest that these conditions are likely to be found only in the hospitals of the medical schools. But I would ask (and I do not ask Sir Francis, for he knows the answer as well as I do), in how many teaching hospitals, general and special, in Great Britain to-day can evidence be found of purposive training? In how many hospitals are there libraries accessible to the wards or departmental libraries within units, and as part of the regular weekly routine, hospital, departmental, or "trainee" conferences? Again, in how many hospitals is sustained research a feature of the period of training? And finally, how many trainees go out into the world indoctrinated with the faith that they are debtors both to their profession and to medical science?

In arrangements for the training of the future specialist we have lagged behind the U.S.A. and Canada for some considerable time. The experiences of a recent visit to the North American continent (June–July, 1946) have once more reminded me of the great defects in our own system—or of the lack of system. In the United States to-day, among the chiefs of the various clinical services in the great medical centres, there is a heightened sense of responsibility in this matter; for there is the same need for a widely distributed specialist service in North America as in Great Britain. It was to me a stimulating and inspiring experience to enjoy the keen atmosphere of this post-war training drive in all too brief glimpses of such functions as surgical conferences at the Massachusetts General Hospital; the fortnightly tea meeting of residents, research fellows, and staff in the surgical laboratory of the Harvard Medical School, with the gallant Elliott Cutler in the chair; the weekly residents' and fellows' conference at the Hospital for Special Surgery in New York; and of the purposive training of the young surgeon in the great Toronto school of surgery directed by W. E. Gallie. These are a few examples of what can be found in almost every hospital of high repute in the United States and Canada.

If the essential working conditions and intellectual background of this period of hospital training for a specialist career, as set out by Sir Francis Fraser, are to be established in our teaching and non-teaching key hospitals, far-reaching reforms will be needed in the pattern of hospital staffing. It is clear that these standards must become part of the policy of the new Regional Boards. But Regional Boards will need instruction and advice. Meanwhile, a move is required from two sources: on the one hand the teaching hospitals, or more specifically their senior staffs, and on the other hand the Royal Colleges, stimulated by the specialist associations which have already enunciated progressive views on this subject. The universities also have their part to play by demanding evidence of such a standard of training before they recognize any individual as a clinical teacher.—I am, etc.,

Manchester. HARRY PLATT.

Further Education of General Practitioners

SIR,—To those who are particularly keen on postgraduate medical education, irrespective of the proposed National Health Service, the lecture by Sir Francis Fraser in your current Educational Number (Sept. 14) is concise, interesting, and most stimulating. The scheme outlined by him on "Further Education for General Practitioners" should definitely assist in the "breaking down of the barriers to the exchange of knowledge and experiences and frequent contact with centres of teaching and research . . . should improve the standard of medical practice." More important still in my opinion "it will increase also the confidence of the medical profession in their ability to perform their high calling and give them cause for pride and *happiness* [my italics] in their chosen career." Please excuse extensive quotations from his lecture. It is such an important article that reprints of it should (if possible) be sent to every medical man and woman—whether G.P. or specialist. The latter would learn very much from it in the assurance and encouragement they could give to the "more enlightened and progressive members of the profession." Hospital authorities, too, would gain by a serious study of its contents.

Shortly before the war—in July, 1939—I was very fortunate in that I was able to attend an intensive refresher course of 2 weeks at Oxford, under the auspices of the Ministry of Health. I can vouch for the extreme usefulness of that particular course and I returned to my general practice much stimulated and suffering in no way from "mental indigestion." It was very well organized. It was a happy and useful fortnight in a most congenial and learned atmosphere. Therefore it is with great pleasure that I note that the Ministry of Health is now contemplating the reintroduction of such intensive courses in general medicine and on some approved specialized subject, in 1947. I agree with Sir Francis that "*now* is the time to plan, and it is the time also to start boldly."

With regard to his first suggestion for the furtherance of the education of the G.P., viz., "Clinical assistantships at nearby hospitals," perhaps the hospital authorities and the powers that be would take due note of this and also of the method adopted at some hospitals as mentioned by the lecturer—e.g., at Newcastle-upon-Tyne. Perhaps when the demand for postgraduate instruction for demobilized doctors declines (? in 1947) the hospital authorities will open their portals to the interested G.P.—I am, etc.,

Leeds. HARRY SUGARÉ.

Selection of Medical Students

SIR,—Light-hearted disregard of appropriate randomization is a little shocking in an article wielding the prestige of statistical methods, such as that by Mr. J. S. Wilkie on the selection test for medical students (Sept. 14, p. 367).

Questions 1 and 2 in the test are looked at askance because the score of the first-year candidates averages nearly 10% higher than the score of the second-year candidates, a whimsical possibility being suggested to account for so curious a result. In fact, the separate batches of first- and second-year papers were assessed at different times, the examiner was instructed to allow for the expected difference of standard in first- and second-year candidates, due to difference in age and experience, and he was further instructed to widen this difference in standard because the proportion of first-year applicants to be admitted was much higher than the proportion of second-year candidates to be admitted. Imagine the examiner's surprised delight in achieving his intention, as shown by Mr. Wilkie's figures, and his bewilderment at Mr. Wilkie's attempt to explain them as an odd property of the candidates. Question 1 involved subjective and objective observation of superficial physiological changes in the candidate and her friends as a result of running. Mr. Wilkie emphasizes the exceptionally low correlation

between the marks in this question and those in the paper as a whole which predominantly involved general knowledge with its current connotation of somewhat academic erudition. The relative importance of tests of keenness of personal observation and of academic prowess can, of course, not be decided by correlation between them but only by correlation with subsequent success in medical practice. One might guess that both, however independent of each other, had some relevance in such a test.

Any criticism of the second half of Mr. Wilkie's article in no way detracts from the important conclusions he draws in the first half, namely that assuming that a general knowledge paper tests relevant qualities in intending medical students, then it is at least as reliable and much more economical of examiners' time to set questions in questionary form. One hopes that the general knowledge test will soon be compared with an intelligence test, and with other aptitude tests, in relation to success in choosing medical students, despite the difficulty and slowness of validation.—I am, etc.,

London, W.C.1. F. R. WINTON.

Physiology of Vision

SIR,—Prof. Burridge takes me to task for having failed to point out to your readers the fact that Prof. Granit's work confirms his own views on the nature of colour vision which were first made public in his book, *A New Physiology of Sensation.*

I should like to point out to Prof. Burridge that in fact this work confirms the far earlier views of Prof. Wundt, published in 1893 (*Grundzüge d. physiol. Psychologie,* **1**, 535). Very briefly, Wundt's theory was that two different mechanisms are put into operation when light is incident on the retina: (*a*) chromatic, and (*b*) achromatic. The former consists of many sharply defined receptors, which vary in their relative activity according to the spectral composition of the stimulus which is applied to them. The latter mechanism, on the other hand, is the same for all parts of the spectrum, except that a maximum effect is produced by the yellow-green, and that there is a gradual decrease in effect as the red and violet ends of the spectrum are approached. The resemblances between this theory and Prof. Granit's discoveries on the mammalian retina are very striking, for whereas Wundt's chromatic mechanism is well represented by Granit's seven "modulators," his achromatic mechanism finds its counterpart in Granit's "dominators."

Under these circumstances, I feel it is unnecessary to refer to other people who may subsequently have had the same idea.

Recently I have obtained some confirmation of the view that Wundt's theory applies to human vision. Using a microstimulation apparatus, by means of which very narrow rays of light can be applied to the fovea, it has been found that there are eight different fixation points for rays of different wavelength. These lie within what may be called "areas of high visual acuity." Thus, when we want to see the detail of a red object, it is this area for red light which is utilized. Several other pieces of evidence are also available, confirming the same idea.

The present position can be summarized, I think, as follows: that, so far as can be seen at present, Wundt's polychromatic theory is at least as likely as the trichromatic theory of Thomas Young, which has served us so well and has been so prolific in stimulating human invention, since colour-printing, technicolour, and various other methods of three-colour reproduction and measurement have been derived directly from it.—I am, etc.,

London, E.C.1. H. HARTRIDGE.

Migraine and the Sympathetic Nervous Pathways

SIR,—Mr. R. G. Rowbotham's article on "Migraine and the Sympathetic Nervous Pathways" (Sept. 7, p. 319) raises several points about which I am not quite clear. In the first place if we are to ascribe the cause of migraine to dysrhythmic impulses from the hypothalamus, which in turn is reacting excessively to stimuli having their origin in the blood or higher nervous centres, then the fact that the headache of migraine is essentially unilateral would mean that the hypothalamic imbalance was asymmetrical, or even unilateral, itself. Yet the postulated blood stimulus is presumably bilateral. Mr. Rowbotham would ascribe the beneficial effects of the operation to the interference with the ascending sympathetic pathway from the upper thoracic cord. However, he also divides the external carotid artery at the same time. It is a well-known clinical fact that some migrainous headaches will respond to some degree to digital pressure over the carotid, superficial temporal, or other vessel, and an alternative explanation of the operative results might be that the external carotid was now ligated. Further, although the pain of the migrainous headache is now believed to have its origin in an abnormal dilatation of the dural and extracranial branches of the external carotid, yet in addition the internal carotid, via the meningeal and superficial frontal vessels, also supplies branches to the dura. This fact might explain the persistence of the pain, to a milder degree, after ligation of the external carotid. Finally, I should like to make it clear that it is not with the fundamental postulate that I disagree, but with the explanation offered for the beneficial effects of the operation—effects which might be due to the ligation of the external carotid alone.—I am, etc.,

London, W.14. DAVID P. NICHOLSON.

Disability from Dust Diseases

SIR,—Your leading article on "Assessment of Disability in Dust Diseases of the Lung" (Aug. 31, p. 301) is of considerable interest to those of us practising in mining areas, and while we have received some new information, we feel there are some certain points that we cannot allow to go unchallenged. In your article you state: "difficulty of the assessment of disability is still there, and at present it is decided largely by radiographical appearances. This method is not satisfactory because it is impossible to differentiate between nodulation caused by iron oxide in the siderosis of arc welders and that shown by the fibrous nodules of silicosis." Surely you cannot seriously give this as a reason that radiographical appearances are not satisfactory; and if so, can we take it that the same applies to a fracture, as the radiologist cannot state whether the fracture is due to direct or indirect violence? Must we therefore cease to use the *x* ray for diagnosis of fracture? The fact that the reticulation in lungs of arc welders, South Wales colliery miners, and workers in iron foundries are essentially similar surely does not preclude *x* ray in the diagnosis of pneumoconiosis in any of these workmen.

While it may be true as you state that the men with iron oxide in their lungs suffer little or no disability, it is certainly not true that miners of the South Wales anthracite area suffered "little or no disability due to the presence of reticulation in their lungs." If the reticulation is coarse or dense, then there certainly is disability present among these workmen. We agree that there has been an increase of the number of men certified by the Board, not as "totally" but as "partially" disabled. This is not due to the difficulty of assessing disability, but is due to the fact that the disease has been recognized as disabling at an earlier stage. Hart and Aslett are to be congratulated in suggesting the inclusion of reticulation as a compensatable disease. We cannot agree that "many men with reticulation who are not disabled are obtaining disablement certificates," and we should be pleased to have your authority for this assertion. While we think the members of the Silicosis Board in this area would be the very last to claim infallibility, and while we are prepared to admit that some very few men with early reticulation suffer little or no disability, we are not prepared to allow to go unchallenged "that there is no doubt that many men with reticulation who are not disabled are obtaining disablement certificates." We have not found that the Board make partial awards without good reason.

In your summing up, we quite agree that physical examination is necessary, but reticulation (coarse) and nodulation do in our opinion mean that the patient is disabled. It would seem to us that research in this matter is being carried out at the wrong end of the stick, and while any method by which pneumoconiosis in miners can be easily and quickly diagnosed and the correct disability determined would be welcomed, we were always under the impression that preventive medicine was the present teaching in medical schools and not "locking the stable door after the horse has been stolen." In other words, compulsory examination of all mine workers at stated periods—both physical and with the aid of *x* rays unless *x* rays can be specially supplanted by a more definite and less expensive method. The crux of the matter is that the problem is primarily

a mining one, and secondarily a medical one. Over a period of some twenty years, when one of us was totally occupied by *x*-ray examination of miners' lungs, we were frequently struck by the number of men who, although working side by side with cases of silicosis later proved by necropsy, showed only very early evidence of pneumoconiosis. Is there some missing factor "X" which renders one man more liable to the disease than another? If there is, the finding of it and not the awarding of compensation when the workman is no longer able to follow any occupation would seem to us to be of prime importance.

Quoting again from your first paragraph ". . . diseases resulting from the inhalation of siliceous matter. The latter produces a fibrous reaction." Surely there can be no question that a widespread fibrosis of lung tissue, as is seen in these cases, must result in impaired lung function and therefore in disability. Furthermore, your leader states that "even if tuberculosis is not a complicating factor the lung is still gradually destroyed." This is surely good reason for removal of men with well-marked reticulation from the dust risk—which practice we invariably carry out. The questions of disability and compensation are later decided by the Silicosis Board with, in our opinion, a high degree of reliability, and yet they use no complex biochemical tests such as you suggest, but one means of assessing disability which you have apparently overlooked, namely, sound judgment based on clinical experience.—We are, etc.,

ARCHIBALD HARPER.
J. MANSEL MORGAN.

Ammanford, Carmarthenshire.

Facial Palsy Accompanying Acute Mastoiditis

SIR,—I was interested in Dr. Kenneth R. Ogilvie's article on the above subject (Aug. 24, p. 263). It is often assumed that facial palsy is indicative of an affection of the inner ear or the meninges. Dr. Ogilvie's cases show that it may indeed be only one of the signs of acute mastoiditis. May I add that facial palsy may also be one of the first signs of a simple acute otitis media, whether catârrhal or suppurative in origin? Every otologist has seen them; I personally have records of six such cases within the last few years.

What is the explanation of a facial palsy, both in simple acute mastoiditis and otitis media? How is it possible for the facial nerve, being tucked away in a bony canal, to be involved in a simple affection of the middle ear with or without extension into the antrum and mastoid process? Is it that in these cases the bony canal surrounding the facial nerve is either totally missing or that there is a dehiscence in the canal? These conditions are well known to anatomists. If this were the correct explanation one could well imagine that the facial nerve, being covered only by a mucous membrane, would participate in any inflammation of the latter. The facial palsy in these cases would therefore be due to a transitory neuritis of the nerve caused by extension of the infection. It would be interesting to hear the views of other otologists on this interesting condition.—I am, etc.,

ARTHUR MILLER.

London, W.1.

Folic Acid for Nutritional Oedema

SIR,—In your leader on "Malignant Malnutrition" (June 22, p. 958) you suggested that folic acid might possibly be of use in the treatment of nutritional oedema. We have employed folic acid (synthetic *L. casei* liver factor) in one case and found that the oedema disappeared in 7 days. The patient, a Bantu child 1 year old and weighing 13 lb., weighed 10 lb. after 5 days' treatment with folic acid.

The use of folic acid was originally suggested by one of us (L.G.) as the outcome of an investigation carried out by P. Fleming, H. D. Barnes, and ourselves during 1944–5, on the treatment of nutritional oedema with a papaic liver digest. It was felt that the oedema vanished, not as a result of added vitamins but through the action of some "anti-oedema" factor. No child ever improved, nor was in a position to absorb from the gut, until the oedema had begun to disappear.

Further cases are in process of being treated with synthetic folic acid, kindly supplied by Lederle Laboratories, New York, to whom our thanks are due.—We are, etc.,

S. SELBY.
L. GOLBERG.

South African Institute for Medical Research, Johannesburg.

Health Service Bill

SIR,—Dr. C. E. S. Flemming is unfair to Dr. Dain in accusing him (Sept. 14, p. 399) of lack of logic and of using statements difficult to substantiate, for he quotes in support of his criticism Mr. Key's remark that every doctor will be free to enter the Service. Now Mr. Key had previously described this claim as impossible and impertinent, and at the time of Dr. Dain's speech nothing had been said to alter that view. Dr. Flemming falls victim to his own complaint. It is not easy to substantiate his claim that the new method of getting a practice has been shown to be a real improvement on the old or that the result of payment by part salary will not be a new form of control over the general practitioner. All this depends on the nature of the regulations made by the Minister. His policy must not be confused with that of his friends, upon whose support he depends, and whose policy still demands a "national, full-time, salaried, pensionable service."

Few Ministers and no Governments feel bound to honour the promises or intentions of their predecessors. On Mr. Bevan's ability to remain at his post and to continue to control the policy of his party depends the realization of Dr. Flemming's hope that much that we do not like in the new Service will in time be regarded with satisfaction. Surely our recent treatment over the Spens Report and the capitation fee tends to show not that the Minister is unwilling but that he is unable to control his friends and advisers. To bargain for delay and hope for the best is little more than a policy of despair, which will not bring us towards contentment but may lead us elsewhere by a way paved with Mr. Bevan's good intentions.—I am, etc.,

R. W. GRAHAM-CAMPBELL.

Warminster.

SIR,—I congratulate Dr. H. M. R. Waddell on his admirable letter (Sept. 7, p. 340). He gives expression to a dissatisfaction which I have so far endured in silence. To many of us it must be impossible to be strongly for or against central versus regional administration and Government ownership of hospitals when we have not experienced them. We cannot be expected to wax indignant about the interference in the doctor–patient relationship under National Health Insurance, a relationship worn so frail by inadequate payment for large numbers of chronics and hypochondriacs that we care not who leaves our panel as long as new arrivals replace them. Nor can we be very exercised about our right to enter a new and similar service when doubtless the Government will be only too glad to accept all comers in view of the shortage of doctors.

What interests me most vitally is: (1) whether or not I shall have to work longer hours for less money; (2) the pension a middle-aged practitioner now entering the Service will get on retirement; (3) the basis of compensation for practices bought since 1939; (4) whether I can retire when I wish and recover the compensation for my appropriated practice.

From Mr. Bevan's refusal to accept the recommendation of his own Spens Committee on the capitation fee I can only draw a sinister conclusion, unless he intends that we shall really be Civil Servants with a fixed-hour day of limited duration and absolute freedom from responsibility outside those hours. Yet the sudden incorporation of the whole population in the new health scheme implies that the existing force of doctors must undertake more work until its numbers are increased—an ironic result, since its detractors condemn as an evil of the Panel system the tendency for doctors to take on more patients than they should in order to augment their income.

This Government came into power as the champion of the oppressed worker. What it and the public do understand are hours and wages. Let us talk to them in their own language and command their appreciation and respect.—I am, etc.,

A. R. THATCHER.

Bournemouth.

SIR,—It is possible that, on balance and in the long run, the National Health Service will prove beneficial to hospital practice and detrimental to general practice. How does the B.M.A. suggest that consultants should vote in its referendum, assuming (as is not the case) that sufficient information lies before them upon which to form an opinion?—I am, etc.,

ROYDON PEACOCK.

London, W.1.

Two-grade Medical Service under the Act

SIR,—It is a truism to-day that medical man-power is inadequate for the decent care of our population. All parties are pledged to make an equal distribution of what is available regardless of the patient's finances. When a vital commodity, e.g., milk, is in short supply but is rationed equally among us we are satisfied. If, for comparison, we express medical services in terms of doctor-hours, which is mainly what they consist of, then the Act falls short of the objective. The Bill will mean, so to speak, skim milk for the masses while the cream will go to the private patient; and more patients who can pay will resort increasingly to doctors privately and so procure less meagre doctor-hours. It will be galling for the man-in-the-street to be taxed for what amounts to skim medical milk for the next ten years.

Under the Act payment will be at a fixed rate and virtually automatic owing to the scarcity of doctors. This stultifies effort, for the average doctor is only human and puts forth the extra effort when there is corresponding reward. Half the good the patient gets out of his doctor is in service of an intangible kind not susceptible of supervision; and the amount of care he gives, not the fittings and style of his surgery, is what counts most. When patients are too numerous for decent handling, then those among his clientèle who are willing to pay will, by reason of the private contract, command that personal touch which we all covet. The Act will perpetuate the present panel *versus* private division of medical service which has led to the disrepute of the profession. The distinction is disconcerting and demoralizing to the young doctor who at hospital learns how to *extinguish* disease and not to *distinguish* between the victims of it. That is the mainspring of professional life, and proficiency has been furthered by an atmosphere of competition which fosters ambition, enterprise, and effort. The guardians of health cannot afford to ignore healthy rivalry which bred the renowned English family doctor; and loyalty to the profession forbids acquiescence in conditions calculated to lower our standard. Parliament may be satisfied, but we shall not be until medical service of one grade, equal in quality and quantity, is meted out to all according to the disease, not the purse, of the patient. To attain service of the best quality a competitive element must be conspicuous in the scheme. In these vital principles the Bill largely fails, but voicing them in the *Journal* will show future generations the feeling of some of our profession in these matters.—I am, etc.,

Clifton, Bristol. A. WILFRID ADAMS.

Early Treatment of Ocular Defects

SIR,—Dr. M. C. Mason's letter shows how important it is that children who begin to squint or have signs of any eye trouble should be seen *at once* by an eye surgeon (Sept. 7, p. 338). When I first commenced as an eye surgeon some thirty-odd years ago, I well remember the parents of squinting children objecting to the school authorities saying their children should have treatment, and that as a higher power had made them like that they would allow no treatment. That was in an age when employees were afraid to wear glasses because they thought they would be thought old and lose their work; yet six years ago I saw three American sailors together and two were wearing glasses.

I noticed when examining recruits for the 1914–18 war that short-sighted young ladies kept their glasses in their handbags; the men, however, wore theirs. At the clinics at which I work there is nowadays no objection on the part of the parents or children to any form of treatment, and although the districts from which the children come vary greatly, I find the children equally keen to do anything to get rid of a squint or to remedy any other defect. In the case of squinters they want to look like their companions; for a girl it is a tragedy, as it lessens her matrimonial chances; and in either sex it may prevent its owner from getting employment. Again, children are not very kind about another person's defects, and it is difficult to hide a squinting eye—the most successful instance that I can think of being one of our lecturers, who wore a monocle in his left eye, which so fascinated us students that we almost forgot that the right eye turned in.

Well, an operation will at any time of life put a non-paralytic squint straight, which is all that the patients or their parents worry about, *but* it does not make the eye that squinted see. Many of these eyes only have a tenth of full vision even if the appropriate glass is worn to correct the refractive error, while they are nearly useless for fine near work unless they have been properly trained. Unfortunately the last two wars have produced many instances of good eyes being lost or damaged, the owner being left with an almost useless squinting eye to carry on with. In 1935 (*Return of Sight in an Amblyopic Eye. Journal*, 1935, **2**, 317) I showed how these amblyopic eyes could be trained to see; and in my clinics, where the proportion of squints is fairly high, I am much struck by the fact that we have a large number of cured cases that report regularly who started treatment at the age of five and have had squints of half a right angle cured by correcting almost all of the optical defect and covering up the good eye, thus making the child use its bad eye three or four hours daily. These children had even the smallest amounts of astigmatism corrected by my predecessor, Mr. A. E. A. Loosely, with the most scrupulous care.

Dr. Aston Key has a letter also in the column adjacent to Dr. Mason's. We find we get children with migrainous headaches caused by quite small visual defects who can see all the letters in the tests, and who gladly come back for replacements if they break or lose their glasses. This vast change in public opinion has been brought about in less than a generation by reason of the good results obtained and the spread of knowledge among the public.—I am, etc.,

London, W.1. SYDNEY TIBBLES.

Sir Almroth Wright and Anti-typhoid Inoculation

SIR,—I happened to be a surgeon-on-probation at Netley in the year 1897 and remember the points made by Dr. Leonard Colebrook very well. A man called Marshbanks and I were both vaccinated by Wright to test out the dose of his anti-typhoid vaccine that summer, and very sick we both were, especially Marshbanks, after the inoculation. I have always attributed my almost miraculous immunity to the germ, when a year afterwards I had charge of a big camp of typhoid cases of the worst sort at Darmali in the Sudan, to my fortunate inoculation at Sir Almroth's hands. Leishman, as reported by Colebrook, arrived from India and was attached to Wright's laboratory at about that time. He was quite out of it as regards the initiation of the anti-typhoid vaccine but became intensely interested in it and in all the work that Wright was doing in subsequent months. At that time or a little later he invented his method of working out the phagocytic index, a method later modified by Wright to be the opsonic index, with which everyone is familiar.

After the transfer of the R.A.M.C. headquarters from Netley to London, Wright's interests in the immediate problems of anti-typhoid vaccine, though keen, were for the time being less great than Leishman's, who, as the professor of pathology at the R.A.M.C. College, was obviously the right man in the right place for the continuous work that went on at the vaccine between the South African and the 1914–18 wars—an effort in which Harrison, Grattan, Webb, Kennedy, and myself were all interested, as his assistants. But I feel sure that of all men Leishman was the last who would have claimed to be the originator of the antityphoid vaccine which was actually in hand and very far advanced at the time of his return from India.—I am, etc.,

Thaxted. S. LYLE CUMMINS.

Shock Treatment of Bronchial Asthma

SIR,—Subsequent to my letter (June 1, p. 849) and that of Dr. Bowman Edgar (July 20, p. 101) I would like to clarify certain points omitted in my short letter. In full agreement with Dr. E. M. Fraenkel (Aug. 3, p. 174) and Dr. E. S. Fennell (Aug. 24, p. 275) I wish to point out, as I have done elsewhere, that the *B. coli* shock treatment is neither the only cure for asthma nor the cure for every asthmatic. I always carry out an investigation of the nose and throat and other possible causes, according to the history of each individual patient. For instance, an asthma attack brought on usually by a head cold could indicate an infection of the sinuses. If this or any other organic cause cannot be found, or if after the removal of one the asthma persists, and if also

no specific allergen (outside the body) can be found by means of skin tests, etc., then the "pyrifer" shock treatment—as an "unspecific" measure—is indicated.

I would not use shock therapy in cases of chronic nephritis, auricular fibrillation, coronary sclerosis with clinical manifestations, severe hypertension, advanced age, decompensated heart, pulmonary tuberculosis, and pregnancy. On the other hand, the usual cardiac enlargement—with dyspnoea, occasional cyanosis, and emphysema—so frequently met with in asthmatics, is no contraindication.

It is, of course, left to every practitioner's discretion to judge for himself and withhold the therapy where he thinks that any intercurrent febrile illness (as demonstrated by the reaction) would be dangerous. I have used "pyrifer" for the past ten years in a fairly large number of cases and have never had any unduly severe reaction which would have caused me anxiety as far as dosage is concerned. I may mention that I give children under ten about half the amount for adults. I always use "pyrifer" in the free interval between and not during the attacks, and visit my patients about 4 hours after the injection to watch the reaction.—I am, etc.,

Spennymoor, Co. Durham. E. BRAUER.

⁂ This correspondence is now closed.—ED., *B.M.J.*

Royal College of Physicians of London

SIR,—The recent letter in the *Journal* (Aug. 31, p. 313) has focused attention once more on the statutes, bye-laws, and regulations of the Royal College of Physicians and the justifiable discontent which they arouse. As is well known, the present regulations do not allow Members to take any part in the running of the College. In fact, they are specifically debarred from doing so under Bye-law CXVIII, which says: ". . . they shall not be entitled to any share in the government, or to attend or vote at General Meetings of the Corporation." Surely this state of affairs is quite out of date, and in view of the great changes now taking place the time is ripe for the College to broaden its representation with a view to ensuring that Members obtain a voice in its counsels and deliberations on common-sense, democratic lines.

Our College instead of remaining a mere academic institution should become a dynamic force, capable of exercising a profound influence for good on various medical, social, and educational problems confronting us and pressing urgently for solution. The first step in this desirable aim must be the provision of facilities for adequate representation by the Members, who should be given every encouragement to form their own standing committee, etc., and take an active part in the management of the College. Obviously one of the important tasks of any newly elected committee should be to go into the question of the revision of the existing regulations concerning the election of Fellows.—We are, etc.,

C. ANDERSON.
M. N. PAI.
D. SHAW.

Sutton, Surrey.

Proposed Ex-Serviceman's Committee

SIR,—I have received many letters strongly approving my suggestion for the formation of an Ex-Serviceman's Committee of the B.M.A., and if I may trespass further on your space wish to suggest as a basis for discussion the form such a committee might take.

(1) Specialists, 4 / G.P.s, 5 } All ex-Servicemen (Temporary Officers).
Retired Regular Officer, 1.
Ex officio, one member of Council.
Secretary, an official of the B.M.A. staff.

(2) Chairman to be elected by the committee and to be *ex officio* member of Council.

(3) The retired regular officer would act usefully in an advisory capacity, and for liaison purposes should preferably be a member of the Naval and Military Committee.

(4) The terms of reference should be: "To consider all matters concerning the problems confronting ex-temporary medical officers of the Services and to report to Council concerning their deliberations and recommendations."—I am, etc.,

Brookwood, Surrey. H. M. STANLEY TURNER.

Obituary

G. DOUGLAS GRAY, C.B.E., M.D.

It is with sorrow that we report the passing of George Douglas Gray, C.B.E., M.D., of Dalkeith, Scotland, and with pride that we here briefly record a remarkable career.

At 15, George Gray matriculated with honours, but finding that Edinburgh University was not prepared to enrol a boy of that age to enter as a medical student he falsified his age, adding a sufficient number of years to qualify for entry. It was not to be the only time that he disremembered his age. At the outbreak of the 1914 war Gray removed the requisite number of years to allow him to go to France. Having graduated M.D. (with honours) soon after his 21st birthday, he became assistant to the late Dr. Murray of Leith. After other assistantships in England he went to British Central Africa under the aegis of the Foreign Office in 1894, and was appointed Principal Medical Officer of a district the size of Scotland. There he battled successfully with the scourges of blackwater fever, dysentery, malaria, and all the ills that beset the white man pioneering in, and ill-adjusted to, an unknown "Darkest Africa." After six years of experience this young doctor established a laboratory for experiment, and for the development of tropical medicine, at Zomba on the Zambesi.

During the South African War Dr. Gray served with the King's African Rifles, and in 1901 was one of the exhausted band of half-dying men who staggered back from the relief of Kumassi. It was during the S.A. campaign he met his future wife, Lucy Harrison, a nurse who had volunteered to serve up-country, in circumstances that would have quelled the ardour of any young woman less wholeheartedly dedicated to a career of healing. Between them, they worked a wide field, his doctoring backed up by her nursing. Lucy Harrison was awarded the R.R.C. In 1902 they were married in England. Immediately on their return to Africa the Foreign Office appointed Dr. Gray to be Principal Medical Officer and Physician on H.B.M. Minister's Staff in Peking, China. Gray relieved Dr. Wordsworth Poole, who had lately died. He found a legation and a Peking slowly recovering from the effects of the Boxer Rebellion siege. He also found the embryo of a hospital, started by Dr. Poole, far outside the city walls in a courtyarded Chinese house for Chinese sick. This he organized and developed until it became something akin to a flourishing cottage hospital, staffed by Chinese doctors and nurses trained by himself, where he performed an average of 20 major operations a week. It was typical of his robust approach to life in general, and his work in particular, that he never begged for money for his hospital. He supported it largely by his own earnings, and when he left Peking for France in 1915 he wrote the songs and music for a pierrot show and with the proceeds endowed the hospital with a handsome carry-on even against his return.

In 1906, on the outbreak of pneumonic plague in Manchuria, he again, with an instinctive sense of fitness, knew that the problem must be faced by the Chinese themselves, but that he, with his British Foreign Office backing, could guide the gigantic task of plague suppression and restriction. He therefore initiated the appointment by the Empress Dowager of the then foreign secretary, Saoke Alfred Sze, to the presidency of the committee for combating the epidemic, and enlisted the services of medical experts on plague, irrespective of nationality and creed, and with them not only fought and overcame the pneumonic plague but collected research information which proved invaluable when later outbreaks threatened. 1915 saw Gray in France in the R.A.M.C. organizing and running the 2,400-bed hospital for the Chinese labour battalions. For this work he was three times mentioned in dispatches.

In 1929 he "retired"—we put the word in inverted commas for it has but academic meaning when applied to the career of one whose energies and activities were boundless. Having spent some years travelling round the world as a ship's surgeon he returned to Scotland and immediately identified himself with work connected with China. Gray championed the cause of the Chinese student in this country. He found that with the outbreak of China's war with Japan, many students were cut off from home supplies, and were, through no fault of their

own, wellnigh destitute—unable to return home, unable to continue their studies for lack of money. Gray saw to it that they received an allowance from the Boxer Indemnity Fund—again he permitted no question of charity or dependence to crop up. When the 1939 war came George Gray, at 70, threw himself into a multiplicity of activities, organizing and training the Dalkeith Home Guard; then combining the chairmanship of a recruiting board in Edinburgh with almost nightly lectures on first aid to units of the Army and Home Guard in the district. It was this intensive activity that brought on his collapse in 1943, and the stroke which paralysed his right hand. Even then he was not beaten, and, having taught himself to write with his left hand, continued to review books for the *British Medical Journal* and other publications.

It was the intention of the present writer to give a short summary of George Gray's career and leave space for an appreciation of his character, but a life so crowded with sheer doing cannot be compressed into a few sentences, and there is left but little room to sum up a character of such unusual and sterling worth as Dr. Gray's. Dogged perseverance, humour that brought him lifelong friendships for his "entertainment value," his imaginative consideration for others, his love of children, animals, the sick, and all helpless things—all these were his. But perhaps his devotion to duty and his gaiety of heart combined were the two most outstanding characteristics of this man who so surely earned the title of "Beloved Physician." Our sincere sympathy goes out to his sorrowing wife and family. W. R. M.

For the first 35 years of this century ROBERT MARSHALL practised in Shanghai, and his sudden death in London last month was a sad blow to a great number of old friends and patients from the Far East. Born in 1870 at Girvan, Ayrshire, he was educated at the Ayr Academy and at Glasgow University, graduating M.B., C.M. in 1891. For the next five years he was medical officer to the Rio Tinto Company at Huelva in Spain. While there he made observations on the malaria parasite, whose life history was being unfolded at the time. In 1896, in collaboration with Dr. George Thin, he read a paper on the subject to the Royal Medical and Chirurgical Society in London, taking his M.D. degree at Glasgow in the same year. For the next two years he worked in Bombay on the Plague Commission, and in 1899 transferred to Shanghai, where he joined Dr. Neil Macleod and Mr. W. Jennings Mills in a practice dating back to 1854. Shortly afterwards a fourth partner, Dr. E. L. Marsh, was taken in, and for thirty years this famous partnership was known throughout the Far East as the "M firm," though later additions and replacements did not keep strictly to the initial letter. In Shanghai Marshall found full scope for the development of his powers. The important professional posts he held he filled admirably. He was a good general surgeon, a wise administrator, a kindly and understanding family practitioner, and above all a man of action who never spared himself. In any emergency his action was as quick and decisive as his thought. Short in stature, deep chested, sandy haired, and of extraordinary vitality, he stood for the clean hard life. A fine athlete himself, he encouraged every kind of healthy recreation among his patients as the finest antidote to the depressing, and sometimes disastrous, effect that life in a strange land and trying climate is apt to produce. He was a living example of his own precepts, and retained a boyish vigour and enthusiasm almost up to the time of his death. He was a major in the Shanghai Volunteer Corps, President of the St. Andrew's Society, founder of one of the two chief golf clubs, and served in turn on the committees of most of the athletic clubs in the town. After retirement his sociable nature, and his considerable skill at billiards and bridge, made him an ever welcome member at the Thatched House Club in London. He leaves a widow, three married daughters, and one son, who is in practice at Brockenhurst and married to the daughter of the late Mr. Rowlands, of Guy's Hospital.—W. B. B.

Prof. JAMES DREVER, of Edinburgh University, speaking at the St. Andrews summer school of the Scottish Council for Health Education recently, drew attention to the part to be played by psychiatrists in the prevention and early treatment of certain organic diseases. He mentioned claims that certain psychological groups of people had gastric ulcers, other groups hypertension, and so on, and said that hospitals were admitting increasing numbers of sufferers from chronic disease of heart and stomach. It was to the detection of this type of disease that he expected psychiatrists would eventually make valuable contributions.

Universities and Colleges

UNIVERSITY OF LEEDS

The inaugural lecture of the faculty of medicine of the University of Leeds will be given in the Riley-Smith Hall of the University Union at 3.30 p.m. on Monday, Oct. 14, by Lieut.-Gen. Sir William MacArthur, K.C.B., D.S.O. Subject: Insect-borne disease and English history. Members of the medical profession are cordially invited to be present.

We are informed by the Society of Apothecaries of London that the name of O. G. Bennett was included in the list of successful candidates for the Diploma in Industrial Health (*Journal*, Sept. 7, p. 349) in error; it should have read "G. B. Oliver."

The Services

The Leishman, the Alexander, and the Parkes Memorial Prizes are open for award in the year 1947 for work done in 1946. Recommendations should be sent in through the usual Service channels with copies of original articles or reports of investigations to reach the hon. secretary, R.A.M.C. Prize Fund Committee, R.A.M.College, Millbank, London, S.W.1, by Dec. 31, 1946. The Leishman prize is for work done in any branch of medicine, surgery, or the allied sciences, or in connexion with the general duties of the R.A.M.C., or of the Army Dental Corps. The Alexander prize is for meritorious work in promoting the study and improvement of military medicine, military surgery, military hygiene, or military pathology. The Parkes prize is for outstanding merit in the promotion of the study of naval or military hygiene; it is open to regular serving medical officers on full pay in the Royal Navy, the Army, or the Indian Army. The Alexander and the Parkes prizes are not open to officers on the staffs of the Royal Naval Medical School, the Royal Army Medical College, or the Army School of Hygiene.

Medical News

A report of the Minister of Health's speech at the annual luncheon of the Society of Medical Officers of Health will be found in the *Supplement* this week.

The inaugural address of the first post-war course of clinical neurology at the National Hospital, Queen Square, Medical School will be given by Dr. Gordon Holmes, F.R.S., on Sept. 30, at 4 p.m.

At a clinical meeting of the Medical Society of the L.C.C. Service on Thursday, Oct. 3, at 3 p.m., at Dulwich Hospital, Dulwich Grove, S.E., the staffs of Dulwich and St. Olave's Hospitals will demonstrate cases. The hon secretary of the Society is now Mr. Iain Matheson, F.R.C.S., at St. Giles's L.C.C. Hospital, S.E.5.

A meeting of the Faculty of Homoeopathy will be held at the London Homoeopathic Hospital on Thursday, Oct. 3, at 5 p.m., when the presidential address, "Looking Before and After," will be given by Dr. Charles Edwin Wheeler.

At a science meeting of the Colour Group of the Physical Society to be held at 3.0 p.m. on Oct. 3 at the Lighting Service Bureau, 2, Savoy Hill, W.C., papers will be read by Mr. N. E. G. Hill.

The Royal Sanitary Institute has arranged the following programme: Oct. 4 and 5 in the Town Hall, Lewes, papers on rural housing, and on army sanitation overseas. Oct. 9, 2.30 p.m., at 90, Buckingham Palace Road, S.W., discussion on the manufacture of ice-cream: the public health aspects, opened by Dr. W. R. Martine. Oct. 26, 10.30 a.m., in the Castle School, Cyfarthfa Park, Merthyr Tydfil, discussion on housing and its amenities.

The Minister of Health will distribute prizes at the Royal Dental Hospital of London School of Dental Surgery on Saturday, Oct. 5, at 3 p.m., at 32, Leicester Square.

The following public lectures will be delivered under the auspices of the Chadwick Trust: Tuesday, Oct. 8, at 2.30 p.m., at 26, Portland Place, W., Sir Arthur MacNalty, "Sir Thomas More as Public Health Reformer"; Tuesday, Nov. 5, at 2.30 p.m., at London Missionary Society, 42, Broadway, S.W.1, Mr. A. Briggs, "Public Opinion and Public Health in the Age of Chadwick"; Thursday, Dec. 5, at 4.30 p.m., at St. Mary's Hospital Medical School, W., Prof. C. H. Stuart-Harris, "The Problem of Prevention of Acute Diseases of the Respiratory Tract, with particular reference to Influenza." Further particulars may be obtained from the secretary of the Trust (204, Abbey House, Westminster, S.W.1).

The programme for the 1946–7 session of the Chelsea Clinical Society has now been issued. The session will open with a dinner meeting at the South Kensington Hotel on Tuesday, Oct. 8, when the president, Dr. Ronald Jarman, will open a discussion on modern anaesthesia. The subjects for discussion at later meetings are as follows: Nov. 12, backache; Dec. 10, plastics in surgery and medicine; Jan. 14, osteopathy; Feb. 11, artificial insemination; March 11, industrial medicine.

The annual general meeting of the Association of Industrial Medical Officers will be held at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C., on Friday, Oct. 18. Private business will begin at 5 p.m., and will be followed by a dinner at the School at 7.30. Details are being posted to members. On Oct. 19 at 10.30 a.m. at the School, Dr. Donald Hunter and Dr. R. S. F. Schilling will address the Association on "Industrial Medicine in the U.S.A."

The date of the Louis Gross Memorial Lecture to be given under the auspices of the Montreal Clinical Society at the Jewish General Hospital, Montreal, has been changed from Oct. 16 to Oct. 23 (see *Journal*, Sept. 14, p. 404).

A new quarterly scientific journal named *Anaesthesia*, the organ of the Association of Anaesthetists of Great Britain and Ireland, is being published on Oct. 1. Intending subscribers should communicate with the publishers, George Pulman and Sons, Ltd., Thayer Street, London, W.1.

A clinical meeting of the Irish Tuberculosis Society will take place at Newcastle Sanatorium, Co. Wicklow, on Saturday, Oct. 19, at 2 p.m. Speakers will be: Dr. F. R. G. Heaf, "Recent Trends in Tuberculosis," followed by Dr. J. A. Deeny; Dr. Dorothy Price, "Is B.C.G. Vaccination a Practical Proposition in Ireland?" followed by Prof. J. C. Saunders; and Prof. F. J. Henry, "Surgery in the Treatment of Tuberculosis." A film (with explanatory commentary) dealing with the modern methods of the treatment of pulmonary tuberculosis in an Irish sanatorium will be included in the programme. Members wishing to attend should notify their intention of doing so to the honorary secretary, the Hospital, Newcastle, Co. Wicklow, not later than Oct. 5. Membership is open to all registered medical practitioners; annual subscription 10s. 6d.

The largest blood transfusion centre outside the London area was officially opened in Whitechapel, Liverpool, on Sept. 12, by Mr. C. W. Key, Parliamentary Secretary to the Ministry of Health. Operated by the National Blood Transfusion Service of the Ministry, it will serve a population of 3,500,000 people in Lancashire, Cheshire, and North Wales, supplying the needs of some seventy hospitals in that region.

Dr. A. L. Crockford has taken up the duties of secretary to St. Thomas's Hospital Medical School on the resignation of Dr. R. J. C. Thompson.

The Court of Governors of the London Hospital has appointed Mr. Osmond Clarke, F.R.C.S., to be surgeon and assistant director in the orthopaedic and accident department of the hospital.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* further falls in the incidence of measles 244, whooping-cough 152, and scarlet fever 76 were recorded, while a rise was reported for diphtheria 22.

The fall in measles, which started at the end of June, continues, and small declines were recorded in most areas. The largest fall in whooping-cough was Lancashire 81, and only small variations were recorded in the remainder of the country. Small increases in the notifications of scarlet fever were general. The largest variations in the local returns of diphtheria were increases in Lancashire 15 and Durham 11.

Fourteen further cases of paratyphoid were reported from the outbreak in Yorkshire West Riding, Halifax C.B. The rise of 12 in the returns for dysentery was mainly due to an outbreak in Hertfordshire, Elstree R.D., which involved 16 persons.

In *Scotland* the notifications of diphtheria decreased by 15, while whooping-cough increased by 48. The cases of dysentery were only 3 less than in the preceding week, one-third of the total being recorded in Glasgow.

In *Eire* a further rise occurred in diarrhoea and enteritis; 51 of the 70 cases were reported from Dublin C.B. The notifications of measles increased by 12, while a decrease was recorded for scarlet fever 13 and whooping-cough 11.

In *Northern Ireland* the cases of diphtheria increased by 6; 10 of the 21 cases occurred in Belfast C.B.

Week Ending September 14

The notifications of infectious diseases in England and Wales during the week included: scarlet fever 791, whooping-cough 1,744, diphtheria 255, measles 1,213, acute pneumonia 284, cerebrospinal fever 28, dysentery 68, acute poliomyelitis 22, paratyphoid 33, typhoid 17.

No. 36

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended Sept. 7.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1946					1945 (Corresponding Week)				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	33	2	23	—	2	25	2	22	2	—
Deaths		—	1				—	—		
Diphtheria	284	29	77	31	21	423	20	135	51	23
Deaths	2	—	2	—	—	14	—	1	—	1
Dysentery	86	7	42	3	—	278	39	93	1	—
Deaths				—	—				—	—
Encephalitis lethargica, acute	—	—	1	—	—	2	—	—	1	—
Deaths		—					—			
Erysipelas			39	8	4			38	5	—
Deaths		—					—			
Infective enteritis or diarrhoea under 2 years				70					97	
Deaths	31	—	9	10	2	64	9	9	25	11
Measles*	1,321	93	62	40	9	538	36	53	10	2
Deaths	—	—	1	—	—	—	—	—	—	—
Ophthalmia neonatorum	74	8	18	—	—	74	6	21	1	—
Deaths										
Paratyphoid ever	42	—	49 (B)	1 (B)	1 (B)	12	—	—	—	2 (B)
Deaths	1	—	—	—	—	—	—	—	—	—
Pneumonia, influenzal	292	13	1	1	1	268	4	6	1	1
Deaths (from influenza)†	5	2	1	2	—	8	2	—	1	—
Pneumonia, primary			133	13				126	7	
Deaths		23		4	6		12		6	4
Polio-encephalitis, acute	5	—				3	—			
Deaths		—					—			
Poliomyelitis, acute	19	1	3	2	—	25	2	1	5	3
Deaths		—					—			
Puerperal fever		2	20		—		2	10		—
Deaths										
Puerperal pyrexia‡	136	11	10	1	—	160	8	9	2	—
Deaths		—					1			
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	668	44	144	17	26	1,151	90	260	14	26
Deaths	—	—	—	—	—	1	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Typhoid fever	21	4	6	4	3	12	—	2	8	1
Deaths	1	—	—	—	—	1	—	—	—	1
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Whooping-cough*	1,824	130	139	27	27	1,177	59	65	53	2
Deaths	6	—	1	1	1	7	3	2	1	2
Deaths (0–1 year)	345	46	41	22	11	305	42	48	41	21
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	3,844	598	501	160	91	3,663	541	549	177	128
Annual death rate (per 1,000 persons living)			11·0	10·3				12·5	11·4	
Live births	8,784	1451	1,028	330	236	6,528	802	842	356	233
Annual rate per 1,000 persons living			20·7	21·1				16·8	23·0	
Stillbirths	236	34	45			182	18	24		
Rate per 1,000 total births (including stillborn)			42					28		

* Measles and whooping-cough are not notifiable in Scotland, and the returns are therefore an approximation only.

† Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

‡ Includes puerperal fever for England and Wales and Eire.

Vitamins in diseases of the muscular system

The following are suggestions for the application of vitamin therapy in certain diseases of the muscular system. Space limits the conditions that can be dealt with here but a sequel will appear in the next issue of the Journal.

Condition	Indications	Therapeutic Agents
ATONIC CONSTIPATION	Lack of tone affects the intestinal musculature. A mixture of the B vitamins, preferably in the form of food is found most effective.	**BEMAX** One heaped tablespoonful provides: 50/60 calories. 0.25/0.5 mg. Vit. B_1. 1.0/1.5 mg. avail. Iron and appreciable amounts of the Vitamin B complex and Vitamin E.
SPASTICITY; paralysis agitans.	Vitamin B_6 has been found to reduce the muscular rigidity in ambulatory patients in whom the condition has not been of long standing.	**PYRIDOXIN** Vitamins Ltd.. 10 mg. tablets, one or more thrice daily or 50-100 mg. daily by injection.
THE MYOPATHIES; muscular dystrophies and amyotrophic lateral sclerosis.	The disturbed muscle metabolism with increased creatinuria is found to respond in some cases to vitamin E together with other factors in whole wheat germ.	**BEMAX** At least 1 oz. daily together with **FERTILOL** (whole wheat germ oil stabilised and standardised), one 3 mg. capsule thrice daily.

Further particulars of the various products are obtainable on request from

Vitamins Limited

(Dept. B.X.K.), Upper Mall, London, W.6.

3 water-soluble vitamins in ONE tablet

Stomatitis, anorexia, gastro-intestinal disturbances, states of debility, fatigue, and certain skin disorders are often associated with a lack of the water-soluble vitamins, nicotinic acid, B_1 and C. When these vitamins are supplied as an adjunct to treatment an improvement is usually noted. 'Nicorbin' tablets containing these nutrients, given thrice daily, supply the average adult requirement.

During pregnancy and lactation, and during the process of wound healing the increased demands for these vitamins are met by supplying 'Nicorbin'. Whenever, from deficient intake or excessive physiological need, these water-soluble vitamins are required, 'Nicorbin' will prove valuable.

PRODUCT OF THE GLAXO LABORATORIES

NICORBIN

COMPOSITION *Each 'Nicorbin' Tablet contains:— Aneurine Hydrochloride (vitamin B_1) 1 mg. Ascorbic Acid (vitamin C) 25 mg. Nicotinic Acid (P.P. factor) 10 mg.*

GLAXO LABORATORIES LTD., GREENFORD, MIDDLESEX. BYRon 3434

'Belling' ELECTRIC BEDWARMER

IT circulates warm air to every corner of the bed. Its smooth, rounded surface makes it quick and easy to slide in and out without catching and tearing bed linen. Cannot waste current as an Indica or Light shows when it is switched on. Can be used, too, for airing clothes, etc. Very strong, light and provided with handle for easy carrying. So economical too — 25 hours warmth for 1 unit of electricity. Supplied complete with 12 ft. of 'flex' for connection to any lampholder or wall socket. ABSOLUTELY SAFE.

PRICE 33/- Purchase Tax 8/3 extra

Obtainable only through your usual electrical shop or showrooms.

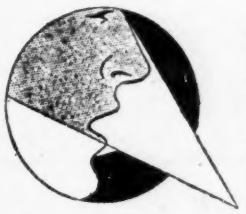
You can't beat a 'Belling'

Belling & Co. Ltd., Bridge Works, Enfield, Middx. Tel.: Howard 1212

C.R.C.519

Para-Nasal Infections

treated with Albucid Soluble Naso-Pharyngeal Solution



Albucid Soluble Naso-Pharyngeal Solution is a highly efficient method of applying local sulphonamide therapy to the naso pharyngeal mucosa, providing rapid bacteriostatic control of the very prevalent infections of the naso-pharynx.

Its effective action is due to its remarkably low surface tension of only 37 dynes per cm. Moreover, Albucid Soluble is the only sulphonamide that can be presented in a neutral solution (pH 7·4).

IN BOTTLES OF ONE FLUID OUNCE × 10%

'Albucid' is the registered name which distinguishes sulphacetamide of British Schering manufacture.

BRITISH SCHERING LIMITED

167-169 Great Portland Street, London, W.1

Descriptive literature will be sent on request.

593

THE CONTROL OF SCABIES
with
'TETMOSOL' SOAP

'Tetmosol' Soap is a pleasantly perfumed soap tablet containing 5% tetraethylthiuram monosulphide—a powerful sarcopticide. Used regularly in the manner of ordinary toilet soap, it has proved especially useful for controlling outbreaks of scabies in families, schools, hospitals, asylums, etc., having a curative effect as well as preventing infestation.

There is no irritant effect on the skin and the method of use is simple and convenient so that the co-operation of scabies patients is readily secured.

'Tetmosol' Soap is issued in 3 oz. tablets, singly or in boxes of 36.

Literature supplied on request.

IMPERIAL CHEMICAL (PHARMACEUTICALS) LTD.
THE RIDGE, BEECHFIELD ROAD,
ALDERLEY EDGE, MANCHESTER

Ph.155

write . . . . or phone
OUR MEDICAL INFORMATION DEPT
. . they will be glad to give you full details of this or any other of our products.
TELEPHONE - - - ILFord 3060
Extensions 99 and 103
TELEGRAMS - Bismuth Phone London

'THIAZAMIDE'
TRADE MARK BRAND

Sulphathiazole

Sulphathiazole is one of the most active of the Sulphonamide drugs for the treatment of pneumococcal, meningococcal, gonococcal and haemolytic streptococcal infections.
Many regard it as the sulphonamide of choice for the treatment of urinary tract infections.

May & Baker's sulpathiazole preparations are protected by British Patent No. 533,495, which was granted on 24th May, 1946, jointly to May & Baker Ltd. and Ciba Ltd. of Basle.

MANUFACTURED BY
MAY & BAKER LTD.

DISTRIBUTORS
PHARMACEUTICAL SPECIALITIES (MAY & BAKER) LTD., DAGENHAM

9066A

Varicose conditions

Elastoplast Technique was evolved with 'Elastoplast' Bandages and Dressings. The successful results described in medical and surgical publications were achieved with 'Elastoplast' Bandages and Dressings.

The combination of the particular adhesive spread with the remarkable *stretch* and *regain* properties of the woven fabric, together provide the precise degree of *compression* and *grip* shown by clinical use to be essential to the successful practice of the bandaging technique.

Elastoplast
TRADE MARK
BANDAGES AND PLASTERS

Made in England by T. J. Smith & Nephew Ltd., Hull.

REMINDER: *Smith & Nephew Plaster of Paris Bandages, Wide Material and Slabs carry the universal Trade Mark* **'GYPSONA'**

TRADE MARK **'AMYTAL'** BRAND
ISO-AMYL ETHYL BARBITURIC ACID

For Simple Insomnia

For simple insomnia caused by physical or mental strain, fatigue, or worry, 'Amytal' supplies the necessary relaxation and sleep. Upon awakening the head is clear; there is no after depression; energy and self-confidence are restored.

'Amytal' is supplied in ¼ grain, ¾ grain, and 1½ grain tablets.

ELI LILLY & COMPANY LTD.
BASINGSTOKE AND LONDON

Letters, Notes, and Answers

All communications with regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, LONDON, W.C.1. TELEPHONE: EUSTON 2111. TELEGRAMS: *Aitiology, Westcent, London.* ORIGINAL ARTICLES AND LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated.

Authors desiring REPRINTS should communicate with the Publishing Manager, B.M.A. House, Tavistock Square, W.C.1, on receipt of proofs. Authors over-seas should indicate on MSS. if reprints are required, as proofs are not sent abroad.

ADVERTISEMENTS should be addressed to the Advertisement Manager, B.M.A. House, Tavistock Square, London, W.C.1 (hours 9 a.m. to 5 p.m.). TELEPHONE: EUSTON 2111. TELEGRAMS: *Articulate, Westcent, London.*

MEMBERS' SUBSCRIPTIONS should be sent to the SECRETARY of the Association. TELEPHONE: EUSTON 2111. TELEGRAMS: *Medisecra, Westcent, London.*

B.M.A. SCOTTISH OFFICE: 7, Drumsheugh Gardens, Edinburgh.

ANY QUESTIONS?

Electroencephalogram in Epilepsy

Q.—*I have under my care a child aged 3. In the first year of life this child had frequent epileptic fits. Phenobarbitone ½ gr. (32 mg.) night and morning was given and the fits completely ceased. The child has continued with the treatment for two years and is healthy and intelligent. Would electroencephalogram indicate whether there is still a liability to fits and whether the drug may now be left off?*

A.—In a case of this sort a normal electroencephalogram would add weight to the view that the epileptic process has been terminated by phenobarbitone, but it would not indicate with certainty that no further fits will occur. It may well be—particularly in a child—that in spite of prolonged medication and the absence of fits the electroencephalogram will remain abnormal. In these circumstances an abnormality which is associated with paroxysmal disturbances in the records, known as larval outbursts, would indicate an active epileptic process, and would suggest the advisability of continuing treatment. Unfortunately difficulty is encountered in that the relationship of the number of larval outbursts to clinical attacks is very inconsistent. It seems that some subjects have a clinical attack whenever the epileptic process begins, whereas others have a high resistance to this process. It follows that the absence of any abnormality between clinical attacks does not necessarily reflect the prognosis for further attacks. This difficulty can to a large extent be overcome by obtaining serial records at intervals throughout treatment.

Recurrent Bee Stings

Q.—*A farmer, aged 48, who has kept bees for 20 years and who has been stung many times, was stung again recently. The sensation was similar to that experienced under gas. He managed to stagger into the house and collapsed. He was blue in the face, his lips were swollen, he was very pale, and soon broke out into a profuse perspiration. He slowly "came to" as if he was coming out of an anaesthetic. What are the chances of the same reaction should he be stung again?*

A.—The attack was an allergic or anaphylactic reaction and the chances of a similar attack if stung again are high. He should get rid of his bees and, so far as possible, avoid further bee stings. Hyposensitization with bee antigen can be carried out and might be considered. The reaction due to any future bee sting would then be at least modified. In view of the severity of the reaction extra care would be necessary with regard to the dosage. Adrenaline is the best and quickest antidote.

Anaesthesia for Perineal Tear

Q.—*Can you give me any information about the technique of local anaesthesia for repair of perineal tear?*

A.—Various methods of local anaesthesia, or as it is more correctly termed of local analgesia, for the repair of the torn perineum or of an episiotomy have been described. A simple and entirely satisfactory method consists in local infiltration of the wound in the perineum and posterior vaginal wall. A sterile solution of procaine, 1 or 2% strength, with 1:100,000 adrenaline is used, or alternatively one of the proprietary self-sterilizing solutions, which are convenient in domiciliary practice. It is advisable to use a syringe of 10 or 20 ml. capacity and two needles, one hypodermic and one intramuscular (gauges 17 and 12).

The patient is placed in the lithotomy position and the vulva is cleansed with an antiseptic solution. With the fine needle a weal is raised at the posterior end of the wound. With the larger needle the tissues under the edge of the skin and of the vaginal mucosa are thoroughly infiltrated to a width of about half an inch. Finally the deeper tissues are infiltrated. A swab soaked in the analgesic solution may be placed on the raw surface. It is necessary to wait at least five minutes before attempting to insert any sutures. This period of waiting, though perhaps tedious to the operator, is well worth while, as by this means a much more satisfactory analgesia is obtained.

Pitressin Test in Epilepsy

Q.—*How is the pitressin test in epilepsy carried out? What is its value and are there any dangers attached to the procedure?*

A.—The water-pitressin test is carried out as follows: The patient is given copious fluid, his fluid intake and output being measured, and he is weighed night and morning. An increase of 2% in the body weight with an excess of fluid intake over output is taken as proof that a positive water balance has been established. This point is usually reached in forty-eight hours. Pitressin 0.25 ml. is then given intramuscularly with 300 mi. of water by the mouth. Further doses of pitressin, 0.5 ml., with 300 ml. of water, are given every two hours to a total of ten injections, unless a fit occurs before, when the test is stopped. A positive result may be expected in at least 30% of epileptic subjects. The test is contraindicated in diabetes mellitus, nephritis, arteriosclerosis, and myocardial degeneration. Otherwise the test appears to be free from danger.

D.D.T. and Animals' Parasites

Q.—*Is D.D.T. of any use against sheep ticks and, if so, can it be applied to a dog's coat without noxious effects to the dog?*

A.—D.D.T. has been found effective as a constituent of a sheep dip against the tick *Ixodes ricinus L.* The easiest way to apply it to a dog's coat would be by shaking in a powder containing 10% D.D.T. Such a treatment would not affect the dog.

Chronic Osteomyelitis

Q.—*What is the treatment of chronic osteomyelitis? Is it justifiable to treat cases with discharging sinuses in the out-patient department?*

A.—Both depend upon so much else: first, the age of the patient, cause of the infection, and number of lesions present. Generally speaking if one is dealing with an old-standing haematogenous staphylococcal infection the local lesion can often be dealt with by relatively radical surgical measures. Certainly sequestra should be removed and cavities opened up for adequate drainage and to facilitate healing. Direct chemotherapeutic attack may hasten the cleaning up of such cavities, but general systemic penicillin in very chronic cases has not yet shown the dramatic effects produced in acute haematogenous osteomyelitis. The opening up of chronic bone cavities must be tempered with some moderation in view of the risks of later pathological fracture. When such cavities are relatively clean further surgical treatment should more frequently be considered in order to obliterate them and give sound final closure. The trouble with the treatment of bone cavities is the natural rigidity of the walls, which, of course, prevents their collapse when the active infection has died down. Organisms tend to remain latent within the extensive scar tissue.

In chronic osteomyelitis or, as Rutherford Morrison stressed that it should be called, *osteitis* due to compound fractures or war wounds, Robertson and Barron have shown how excision of scar tissue and infected bone, followed by the insertion of muscle flaps or skin grafting, and later by the obliteration of cavities with iliac cancellous bone grafting, can heal chronic offensive disability.

The answer to the second part of the question is that it depends on the "out-patient department." Treatment as suggested above? Certainly not. The week-in, week-out dressing of chronic sinuses? Certainly not, for this is not treatment of the disease. Treatment as part of a planned programme may have some place in an out-patient department if the department is such that complete surgical precautions are followed. Too often cases of chronic osteitis are regarded as dirty problems which cannot be made dirtier—let alone the impunity with which such cases are treated alongside cases of industrial injuries to the hand, burns, and other wounds.

Treatment of Empyema

Q.—*What is the accepted treatment for acute and chronic empyema? When is rib-resection performed?*

A.—A full answer to this question would require a volume. Treatment of acute empyema varies greatly according to the causative organism, the presence of accompanying lesions in the lung and elsewhere, and anatomical aspects. The exact place of penicillin in the treatment of acute empyema has still to be determined. With all these variable factors there is no one "accepted treatment" for empyema, and it is impossible in a short answer to deal in any useful way with the first part of this question.

With regard to the second part—in acute empyema rib-resection is indicated only when the collection of pus is localized by pleural adhesions, which will generally be the case if the pus has become thick. While the pus is thin and there is no evidence of adequate pleural adhesions ("pyrothorax" rather than localized "empyema"), the pus must be removed by aspiration or by intercostal drainage. Drainage by a closed method may be indicated even after rib-resection. The most important part of the treatment is to secure complete re-expansion of the lung. This is helped by the early application of suitable active inspiratory breathing exercises. The tube should not be removed from a drained empyema so long as there is evidence that any residual empyema space remains; and if there is any doubt about this it is well to outline the sinus and residual space, if any, with iodized oil and take radiographs before deciding about removal of the tube. Recently some success has been reported in the treatment of acute empyema caused by penicillin-sensitive organisms by aspiration and injection of penicillin until the pus becomes thick, followed by intercostal drainage, which is used as a method of continuing the intermittent aspirations and injections of penicillin. The exact place of this line of treatment has still to be determined. With regard to chronic empyema it should be realized, first, that many such empyemata are the result of inadequate treatment of acute empyema. In any case of chronic empyema the diagnosis is not complete until the underlying disease, especially tuberculosis, new-growth, and chronic suppurative processes in the lung, has been considered. The diagnosis of chronic simple empyema having been thus established the first step is to secure free drainage by adequate rib-resection. Suction drainage, breathing exercises, and, unless there is a pleuro-bronchial fistula, irrigation of the cavity should then be instituted. If this does not result in obliteration of the empyema space plastic operations on the chest wall, combined in resistant cases with one of the several special surgical techniques for mobilization of the thickened parietal pleura, will become necessary.

Sequelae of Encephalitis Lethargica

Q.—*Is there any effective treatment for chronic encephalitis lethargica? Have penicillin, the sulphonamides, fever therapy, protein shock, or repeated lumbar punctures any proved value in the treatment of this condition?*

A.—Penicillin and the sulphonamides are of no value in the treatment of chronic encephalitis lethargica. There is no reason to suppose that repeated lumbar puncture would be helpful. Artificial pyrexia, most simply induced by the intravenous injection of T.A.B. or *B. coli* vaccine, has a limited value, especially for encephalitic parkinsonism, when the disorder is not too far advanced.

LETTERS, NOTES, ETC.

Medical Service in Australia

SIR ERNEST GRAHAM-LITTLE, M.P., writes: Dr. Gilliland quotes a letter from the High Commissioner of Australia received by the *Medical World*, the organ of the Medical Practitioners' Union, containing the statement: "No Bill to establish a State medical service has been introduced into the Commonwealth Parliament of Australia" (*B.M.J.*, Sept. 14, p. 407). Dr. Gilliland declares that this "contradiction" "calls for explanation from me," and I hope you will allow me to supply it. The information from my correspondent in Canberra upon which I based my letter (*B.M.J.*, Aug. 24) was to the effect that an Act containing proposals for State-provided and partially State-controlled medical services was passed some years ago by the Socialist Government in Australia; that the medical profession in Australia, regarding these proposals as a threat to their freedom, refused to accept service under the Act and that consequently it has not been put into operation up to the present date. One would like to see the letter from the M.P.U. (a consistent advocate of State service) that elicited the above very guarded reply which, it is to be noted, does not "contradict" my statements but merely repudiates a description (which nobody offered) of that Act as "establishing a State medical service." (Fortunately, as the Minister of Health, confronted with the Australian revolt, realized, one cannot establish a State medical service without the consent of the doctors.) I have not seen the text of the Australian Act and I am writing to Canberra asking to be furnished with a copy, but from my correspondent's description it would seem to present a general resemblance to Mr. Bevan's Bill. A State service postulates national full-time salaried pensionable medical personnel which has been the declared goal of the Socialists for more than a decade. (See *Hansard*, May 1, Col. 225.) Mr. Bevan's Bill goes a very long way towards achieving this aim: he prudently forbears for the moment to go *all* the way, but he has not forgone the hope and expectation that this aim will be achieved when, as he expressed it in the debate, the time is "ripe" for that ultimate complete fulfilment. It is significant that a motion to introduce such a service in Britain was proposed to the Representative Body in 1943 and was rejected by a twenty-to-one majority at a meeting attended by practically the entire membership of that body: their verdict has been repeated on several occasions since that date. It is clear that our Australian colleagues saw in the Act which they rejected a similar threat to their freedom, and I submit their example is one which we might well follow now.

Varicose Ulcers and Penicillin

Dr. W. T. E. BLACKMORE (Abergavenny) writes: A reference in Letters, Notes, etc., in the *Journal* of Aug. 17 (p. 252) prompts me to relate my experience of the value of penicillin cream in the treatment of varicose ulcers. Thirty-two varicose ulcers, with penicillin-sensitive organisms, have been successfully treated during the last ten months by adopting the following technique. After thorough cleansing with warm saline a dressing of penicillin cream (100,000 units to 1 oz. (30 g.)) is applied on a gauze pad. The entire lower leg—foot to knee—is then firmly bandaged with a supporting bandage of the Unna type and a second thin gauze bandage applied over it. This is left in position for a week, the patient being advised to pursue in the meantime his or her normal activities; then the dressing is renewed. The average length of treatment is seven to eight weeks, that is, seven or eight dressings; after which the ulcer is firmly healed; and treatment of the underlying cause is then carried out. One case, which took twelve weeks to clear, was a varicose ulcer some 6 by 2½ in. (15 by 6.4 cm.); so one is entitled to assume that this form of treatment is of definite value.

An Offer of Medical Equipment

A medical man in the South of England informs us that the doctor son of one of his patients was killed in Burma. The father has a sphygmomanometer, an electric ophthalmoscope, and an auriscope; also one or two oddments. He would like to give these to a doctor who has lost his equipment by reason of war, or to a doctor returning from the Forces and in need of professional apparatus. Letters addressed to this office will be forwarded.

Corrections

We apologize for the oversight by which the words "encephalitis" and "encephalopathy" were misprinted in the footnote to Dr. C. E. S. Harris's letter last week (p. 442).

The word "undermined" should have read "underlined" in Dr. Anthony C. Hamer's letter published under "Tobacco and Ulcer Dyspepsia" in the *Journal* of Sept. 14, p. 402.

A misprint occurred in Fl.-Lieut. W. P. U. Jackson's letter (Sept. 14, p. 403). The word "trend" in the first sentence should of course be "triad," and the clause should run ". . . the triad of symptoms, polyarthritis, urethritis, and conjunctivitis noted in my article (Aug. 10, p. 197) as being characteristic of Reiter's disease may also be associated with bacillary dysentery."